



# SOLETANCHE FREYSSINET

ANNUAL REVIEW OF 2021

 SOLETANCHE FREYSSINET

Soletanche Freyssinet concentrates a body of expertise and brands unique in the world of construction and engineering.

Soletanche Bachy, Menard, Terre Armée, Freyssinet, Nuvia and Sixense all focus their technical excellence on delivering performance with sustainability for every project.



**SOLETANCHE BACHY**

SoleTANCHE BACHY is a world leader in foundations and soil technologies. The company has around 80 subsidiary companies and branches in 60 countries to provide public- and private-sector customers with high-performance, innovative geotechnical solutions. It operates both as a general contractor and specialist subcontractor for the design, construction, refurbishment and maintenance of every kind of structure, from ports to dams, car parks, metro systems, tunnels, energy installations and buildings.



Menard delivers soil improvement solutions at every stage of the infrastructure life cycle through its core business skills of soil survey, improvement and remediation. True to the intuitive genius of its founder Louis Ménard, the company works worldwide on the design and implementation of solutions that save resources and ensure a more sustainable future for ground improvement.



**FREYSSINET**



**TERRE ARMEE**

Terre Armée designs and develops retention, bridging and protection solutions, and also offers unrivalled experience to reinforced backfill and soil-structure interaction projects. Its specialist techniques are used in a wide range of applications as varied as roads, rail systems, heavy industry, and environmental and water industry civil engineering projects.



**NUVIA**

Nuvia applies its experience in the nuclear industry to provide its industrial customers with through-life support for installations operated in challenging and highly regulated environments. Nuvia serves a broad diversity of sectors, from nuclear energy to civil and military defence, health and the environment. It offers its customers a comprehensive range of support services, engineering expertise and the products needed for the design, construction, operation and dismantling of their industrial facilities. Nuvia works closely with its customers to guarantee the highest levels of safety and performance as part of building a safer, cleaner and more sustainable world.



**SIXENSE**

Sixense provides full support for its customers from the design of their facilities and infrastructures, through construction and maintenance to their eventual dismantlement. Its key mission is to monitor the condition and behaviour of engineered structures and infrastructures, ensure their safe construction and operation, and optimise their maintenance. The activities of Sixense are structured around four centres of expertise: engineering, monitoring, software solutions and the digitalisation of existing processes and systems.



## "A STRONG RECOVERY IN 2021"



**Manuel Peltier**  
CEO  
of Soletanche Freyssinet

After a year overshadowed by the Covid crisis in 2020, Soletanche Freyssinet bounced back during 2021 to report higher business volumes than 2019, annual revenue of €3.6 billion and good overall profitability. The very strong and dynamic recovery we experienced in 2021 encompassed every region of the world.

Although the Covid crisis was initially a cause for considerable concern, we can now see in retrospect that there was actually no significant slowdown in the number of projects we were invited to consider and carry out. Contract signings for new projects continued at a sustained pace during the year, and our backlog rose to new record high.

Over and above our many achievements and impressive new business volumes, 2021 was also marked by the continued and intensified implementation of initiatives to contain our environmental footprint.

As engineers, we play a major role in this respect, and are doing our utmost to succeed in the major environmental challenges we face today and going forward. Our goal is to achieve a 40% reduction in our Scopes 1 and 2 CO<sub>2</sub> emissions by 2030, and a 20%\* reduction in our Scope 3 indirect emissions by the same date. These ambitions are the background to developments like our Exegy low carbon concrete technology, and our Group-wide commitment to taking proactive leadership in green business projects. This has involved us in implementing special action plans at operational level, and I am gratified to see that all our teams have taken up this challenge with enormous enthusiasm, involvement and motivation.

**"2021 was marked by the continued and intensified implementation of initiatives to contain our environmental footprint".**

Our forward development also involves acquiring new companies, and during 2021, we continued to invest in this way with the acquisition of ground remediation specialist Dunton Environmental in the UK, and port contractor Brady Marine in Australia. We also completed our acquisition of Farrell on the west coast of the USA as part of further expanding our geographic reach.

With its six brands and their complementary expertise, large backlog, worldwide presence and expert, united and committed teams, Soletanche Freyssinet has every reason to look confidently to the future.

\*compared with 2019 levels

# MANAGEMENT TEAM



**Manuel Peltier**  
Chief Executive Officer,  
Soletanche Freyssinet



**Marc Lacazedieu**  
Chief Executive Officer, Menard



**Christophe Dauchy**  
Chief Executive Officer,  
Soletanche Bachy



**Stéphane Abry**  
Managing Director,  
Soletanche Bachy



**Jean-Philippe Ricard**  
Managing Director, Freyssinet



**Mark Deary**  
Chief Administrative  
& Financial Officer,  
Soletanche Freyssinet



**Bruno Lancia**  
Managing Director, Nuvia



**Vincent Oudin**  
Chief Executive Officer,  
Terre Armée



**Pascal Berger**  
Managing Director, Sixense



**Guillaume Billaroch**  
Marketing & Communications  
Director, Soletanche Freyssinet



**Lorenzo Alessi**  
Quality, Safety & Environment  
Director, Soletanche Freyssinet



**Edouard Siret**  
Chief Information Officer,  
Soletanche Freyssinet

## A GLOBAL PRESENCE

**North America**

19.6%  
of annual revenue

2,211  
employees

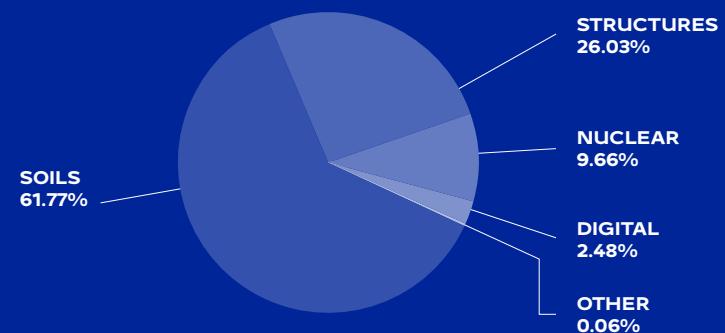


## PERFORMANCE IN 2021

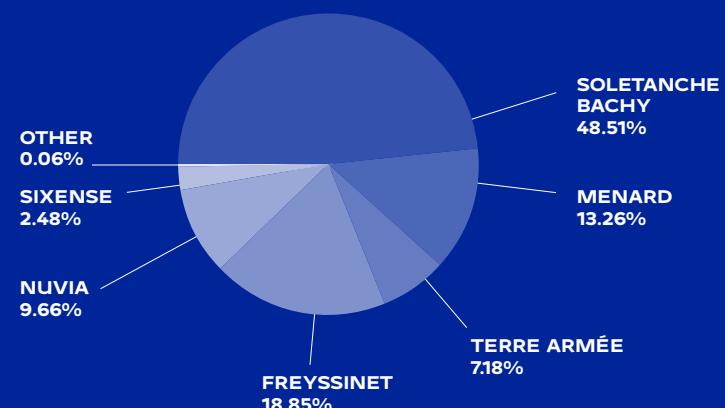
**ANNUAL REVENUE**  
€3,634 m

**EMPLOYEES**  
22,727

### BREAKDOWN OF ANNUAL REVENUE BY CORE BUSINESS

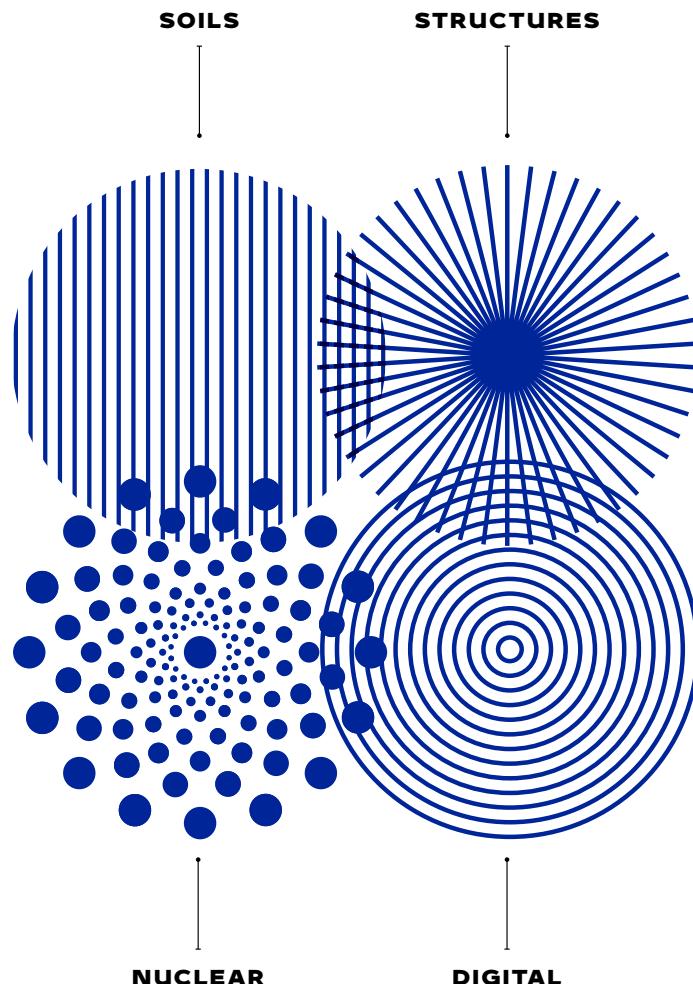


### BREAKDOWN OF ANNUAL REVENUE BY BRAND



# 6 BRANDS, 4 CORE BUSINESSES

Six brands in four core businesses serving the construction industry.

**SOILS****STRUCTURES****SOLETANCHE BACHY**

Annual revenue  
€1,763 m

Employees  
9,944

**TERRE ARMEE**

Annual revenue  
€261 m

Employees  
953

**menard**

Annual revenue  
€482 m

Employees  
1,912

**FREYSSINET**

Annual revenue  
€685 m

Employees  
6,247

**NUCLEAR****DIGITAL****NUVIA**

Annual revenue  
€351 m

Employees  
2,635

**sixense**

Annual revenues  
€90 m

Employees  
749

## BUILDINGS

Offices, homes, healthcare, education, retail, the arts, industry... Soletanche Freyssinet is involved in all types of building construction alongside public and private-sector stakeholders, focusing our support on facilitating their responses to the challenges of urban development, the ecological transition and economic and social development. Our vision is to put construction to work to help people, their businesses and their lives.



### HOMES

#### **Grand Marina Saigon, Ho Chi Minh City, Vietnam**

The city of Ho Chi Minh in Vietnam is engaged in a period of rapid change, with a great deal of work underway to upgrade its transport networks and build new homes. The Grand Marina Saigon project is part of this urban expansion: the enormous residential complex in the regenerated Ba Son district of the city is being developed by local luxury property developer Masterise Homes, and will be managed by JW-Marriott Residence.

The teams of Bachy Soletanche Vietnam completed the foundation works for this property complex in record time, and in full compliance with all international safety and environmental requirements. The project included drilled piling and the construction of diaphragm walls.

**SOLETANCHE BACHY**  
#makingyourdayeasier  
#fostergrowth

### RESEARCH

#### **The ELI Beamlines Facility research centre, Czech Republic**

In the Czech Republic, Nuvia successfully tendered for a public-sector contract to supply a radiation and ionising gas monitoring system for the ELI Beamlines Facility, a research centre that houses the world's most powerful lasers. Developed by NuviaTech Instruments, this system monitors the environment to ensure that ionising radiation levels remain at safe levels. It also provides surface contamination monitoring for personnel and objects, individual dosimetry for employees and a radiation monitoring system for gases.

**NUVIA**

#careforall



### RETAIL

#### **New distribution centre in Secaucus, New Jersey, USA**

For this project in New Jersey, Menard installed more than 5,000 controlled modulus columns (CMCs) up to 54 metres depth for a future 30,000 m<sup>2</sup> distribution centre; a record for this classic Menard soil improvement technique.

**MENARD**

#fostergrowth



### RETAIL

#### **The Vicente Lopez shopping centre, Argentina**

As part of the regular maintenance programme, a major retailer called in the teams of Freyssinet to repair the 14,500 m<sup>2</sup> roof of its supermarket at Vicente Lopez in Buenos Aires province. The work involved reinforcing the main roof beams using additional prestressing, strengthening the secondary beams using carbon fibre fabric (CFF), upgrading the lighting, and installing a new weatherproof covering. After 12 months of work, the supermarket now has a new lease of life!

**FREYSSINET**

#makingyourdayeasier  
#careforall



**HEALTHCARE**  
**The Marie Curie Hospital, Bucharest, Romania**

In Romania, the NGO Dăruiește Viță (founded 2012) has launched a major fundraising campaign to appeal for donations to build a hospital for children with cancer. Thanks to 350,000 private individuals and 5,600 companies that donated in response to the appeal, the NGO was able

to begin construction work on the Marie Curie Hospital in the capital Bucharest. When completed, it will offer up-to-date facilities and five operating theatres.

The teams from Sixense are providing structural monitoring of the building during the construction phase.

**SIXENSE**  
#makingyourdayeasier  
#careforall


**RETAIL**  
**Lidl Logistics Center, Bucharest, Romania**

In Romania, the country's logistic capacities are about 30% lower than the market needs. To overcome this lack, the Romanian branch of Lidl, one of the major players in retail, has been working for a long time with the subsidiary of Soletanche Bachy in Romania. It has designed and built more than 10 supermarkets and 4 logistic centers, out of the total 7 existing in the country, including the latest one in Cernica-Bucharest. Most of them have been built with Screwsol® pile technology.

**SOLETANCHE BACHY**  
#fostergrowth  
#makingyourdayeasier

**OFFICES**
**Chocolate Factory, Bergl, Austria**

This ActivSkeen project is of major interest to chocolate lovers... Our photovoltaic design and engineering teams have designed and installed the semi-transparent photovoltaic modules that decorate the reception hall of the chocolate museum at the world-famous Zotter Experience World in the Austrian state of Styria. This installation bathes visitors in radiant filtered sunlight, at the same time as generating electricity.

**ACTIVSKEEN**  
#accesspower #greenisgreat


**INDUSTRY**  
**Balikpapan refinery, Indonesia**

Menard is a contributor to the Refinery Development Master Plan (RDMP), a strategic national project to upgrade the Balikpapan oil refinery on the Macassar Strait in Indonesia. In addition to boosting its production capacity,

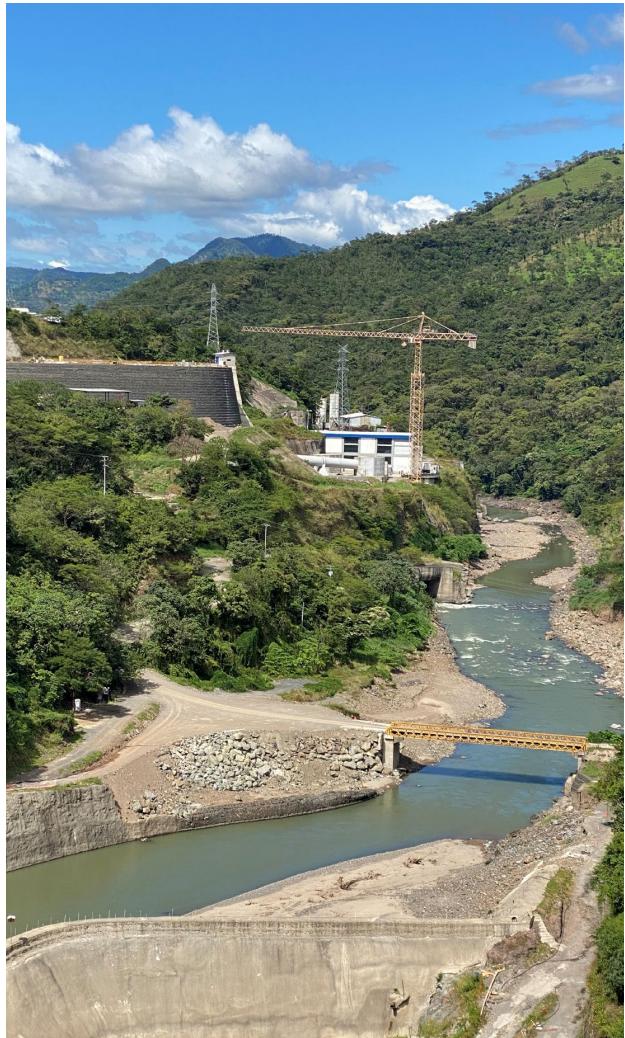
this project is designed to make the refinery more environmentally friendly by reducing its energy consumption levels and making its products and processes compliant with Euro V emission standards.

**MENARD**  
#accesspower  
#greenisgreat

# ENGINEERED STRUCTURES

Bridges, tunnels, dams, mines, wind farms, nuclear power plants, stadiums... Soletanche Freyssinet is involved in the design, construction, monitoring and maintenance of civil engineering structures worldwide.

Our six companies leverage their technical excellence to improve the performance and sustainability of engineered structures through the main core business activities of soils, structures, nuclear and digital, as they apply to construction and infrastructures.



## DAMS

### El Chaparral Dam, El Salvador

This project is an excellent example of synergy at work between the teams of Soletanche Freyssinet.

In El Salvador, teams from Rodio Swissboring (Soletanche Bachy) worked on the project to construct the El Chaparral hydropower project in the north-east of the country. Rodio Swissboring used digital BIM technology to create digital models of the injection works and optimise the dimensioning of the structure. The project included installation of a waterproof membrane, as well as drainage and instrumentation for the dam (with input from Sixense). The construction of a rock embankment and a plastic concrete cutoff wall on the right-hand edge of the dam, waterproofing work, and the additional work in the project's water intake reservoir were carried out in conjunction with Freyssinet subsidiary company Carpi.

This project for CEL (Comisión Eléctrica de El Rio Lempa) is one of the largest in El Salvador and in Central America.

The completed power plant will have an annual generating capacity of 232 GW/h.

### SOLETANCHE BACHY, SIXENSE, CARPI (FREYSSINET)

#accesspower  
#fostergrowth



## BRIDGES

### Nowra Bridge, New South Wales, Australia

Freyssinet has made its contribution to the impressive Nowra Bridge project in the Australian state of New South Wales. This river crossing is about to gain a completely new four-lane road bridge over the Shoalhaven River constructed alongside the existing 140-year-old bridge, which will be turned over exclusively to pedestrians and cyclists. Freyssinet launched the deck of the new bridge, as well as supplying and installing its spherical bearings.

**FREYSSINET**  
#makingyourdayeasier

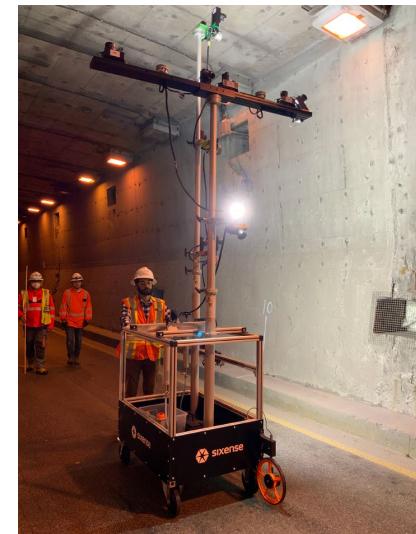


## NUCLEAR POWER PLANTS

### Dampierre en Burly, France

As part of the ongoing national programme to upgrade the safety systems of France's nuclear power plants, the consortium of Nuvia/Campenon Bernard and EDF has developed and implemented a series of new solutions to limit the consequences of a hypothetical critical incident. Some of these solutions are based on mechanical equipment designed to operate in extreme radiological and thermal environments with no human, electrical or hydraulic intervention.

**NUVIA**  
#careforall



## TUNNELS

### The Louis-Hippolyte-La Fontaine bridge-tunnel, Montreal, Canada

The Louis-Hippolyte-La Fontaine bridge-tunnel is a combined road tunnel and road bridge that crosses the St. Lawrence River to connect Longueuil to Montreal. The tunnel is 24 metres below the water level, and surfaces on île Charron. The bridge-tunnel is used daily by around 120,000 vehicles, and the Canadian Ministry of Transport is running a major programme of remedial and upgrade works to extend its working life. With responsibility for supervising and monitoring these works, Sixense is using HD data acquisition, and has created a 3D model of the structure to map those areas requiring repair, as well as creating the repair database and a repair monitoring system using its Beyond Asset software.

**SIXENSE**  
#makingyourdayeasier

**BRIDGES****National recovery plan: Sixense is awarded two contracts following the Connected Bridges call for projects in France**

Local and regional authorities still lack even basic information about the condition of their current estate of bridges and retaining walls. The French national recovery plan and its Connected Bridges call for projects programme coordinated by Cerema is designed to fill this information gap. As a result of its submission, Sixense has been awarded contracts for two projects: IA2 (scour detection for bridges) and VIVOA (a structural inspection solution that uses video analysis and AI algorithms to provide automatic identification of typical issues). Both projects are intended to provide local and regional authorities with the resources they need to monitor bridges and their ancillary structures autonomously and at affordable cost.

**SIXENSE**

#makingyourdayeasier #careforall

**NUCLEAR POWER PLANTS  
Cattenom, France**

Unit 3 of the French Cattenom power plant in north-eastern France had its third ten-yearly inspection between February and September 2021, after which it was reconnected to the national transmission grid. This inspection covers a long list of regulatory checks, including verification of the mechanical strength and sealing of the reactor building containment structure.

The successful outcome of this key stage effectively validated

the new composite skin installed on the dome by the Nuvia/Lassarat consortium teams to improve the safety of the unit and the third containment barrier. This project provides further evidence of the impressive contribution made by Nuvia to raising nuclear power plant safety levels to comply fully with the highest and most demanding international standards.

**NUVIA**

#careforall  
#accesspower

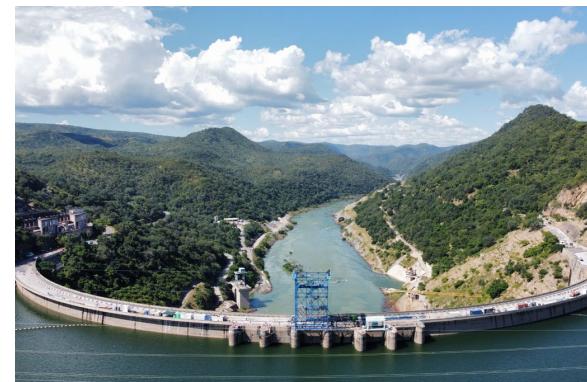
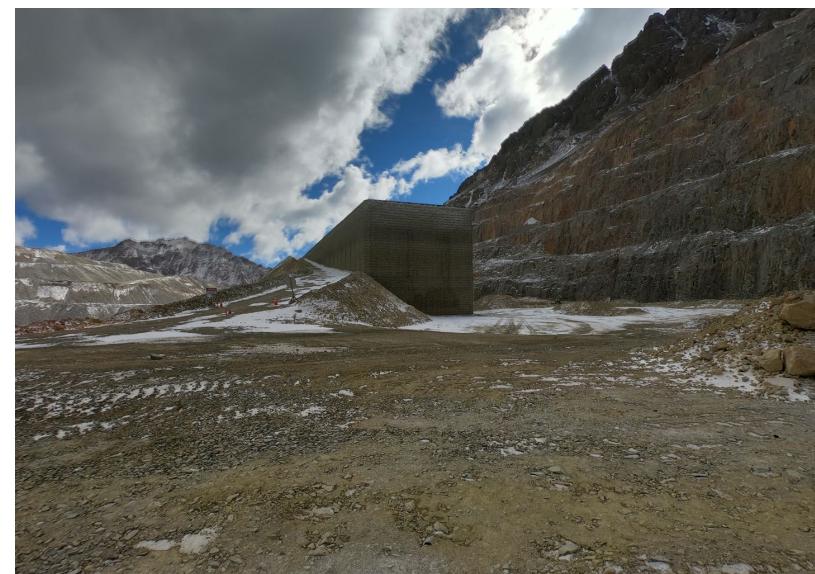
**MINES****Copper mine, Chile**

In the north-east of Chile, 150 km from Santiago and at more than 3,500 metres altitude, CODELCO (the Chilean national copper corporation) operates a mine in mountainous terrain subject to very significant natural hazards. The major Terre Armée project underway here involves building walls to protect the mine from avalanches and rockfalls. With heights of up to 25 metres, the four walls will use 200,000 m<sup>3</sup> of Terre Armée® and enable mining operations to continue even in

the depths of winter. At 270 metres long, the largest wall is 25 metres thick and 25 metres high. Located down-slope, they are designed to absorb and redistribute the energy of avalanches to protect mine infrastructures and employees. They have been custom-designed to maximise their effectiveness in these specific geographical and geological conditions, and to blend seamlessly with this breathtaking natural setting.

**TERRE ARMÉE**

#careforall

**DAMS****Kariba Dam, Zambia**

The Kariba Dam between Zambia and Zimbabwe in Africa was built in 1955. After an inspection of the structure identified a large number of concerns, a substantial repair and refurbishment programme was launched in 2017.

It was at this point that the teams of Freyssinet became involved in the repair and remodelling of the dam spillway; a project that began in 2020 and will continue until 2024. Once completed, the work will breathe new life into this iconic structure, which remains essential for the future economic development of Zambia.

**FREYSSINET**

#accesspower #fostergrowth

**BRIDGES****Saemangeum Bridge,  
South Korea**

In South Korea, the teams of Freyssinet are involved in the project to build the Saemangeum Bridge, with the supply and installation of its 192 stays. This is the first time that Freyssinet has used strands with a tensile strength rating of 2160 MPa.

With a span of 420 metres, the Saemangeum Bridge will be one of the major elements

of the new north-south 6-lane Saemangeum Highway that will link the airport to the new communities now being built around the bay. Work on the bridge is expected to complete in 2023.

**FREYSSINET**

#makingyourdayeasier  
#fostergrowth



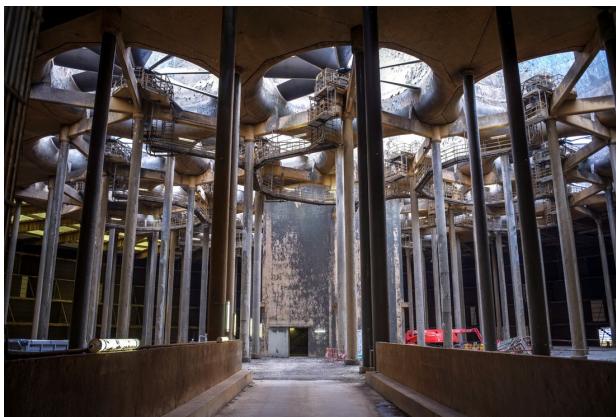
### **NUCLEAR POWER PLANTS**

#### **Descaling the air coolers of the Chinon and Cruas power plants, France**

Following on from the Bugey power plant at the end of December 2020, Nuvia completed two other air cooler descaling projects at the Chinon and Cruas Meysse nuclear sites in France during 2021. These operations included installation of the latest upgrades designed by Nuvia to make these essential pieces of machinery more efficient, safer and more robust.

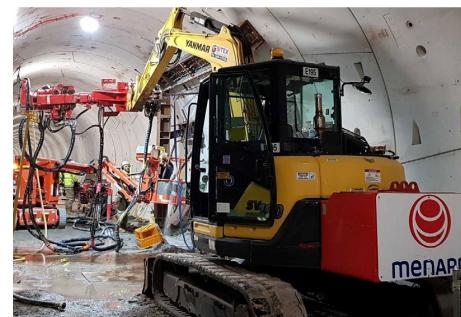
**NUVIA**

#careforall



# **INFRASTRUCTURES**

Roads and motorways, railways, tramways, metro systems, urban roads, cycle paths, ports, airports... Soletanche Freyssinet companies operate both as general contractors and specialist subcontractors for the design, construction, refurbishment and maintenance of every kind of infrastructure. As part of their non-negotiable commitment to environmental protection and conservation, their expertise also spans urban development, water treatment and supply infrastructures, decontamination and ecological engineering.

**METRO SYSTEMS****Melbourne Metro, Australia**

The City of Melbourne has recently embarked on the Metro Tunnel Project, a major urban rail infrastructure project that includes construction of a 9 km twin tube tunnel and five new stations. Menard has carried out the soil improvement work for six safety routes between the tunnels, where the natural soil conditions fell short of the characteristics required.

**MENARD**

#makingyourdayeasier

**AIRPORTS****Abu Dhabi International Airport,  
United Arab Emirates**

The Midfield Terminal Complex (MTC) is simultaneously an impressive architectural achievement and the largest structure yet in the UAE. Its construction is required to meet the very significant growth in passenger volumes at Abu Dhabi International Airport. Sixense was contracted to improve the level of control and accuracy of the soil improvement campaign for this new terminal. Monitoring data was streamed continuously and in real time to all project stakeholders.

**SIXENSE**

#makingyourdayeasier  
#fostergrowth

**MOTORWAYS****The Dunkettle Motorway Interchange, Cork, Ireland**

Cork, Ireland's second-largest city, is upgrading its major motorway interchange at Dunkettle to streamline the flow of increasing traffic levels. Menard provided soil improvement services for a number of embankments (up to 13 metres high) using an innovative variant of the initial solution. The interactions of this work with existing structures made this a complex and ambitious project, but ultimately a highly successful one!

**MENARD**

#makingyourdayeasier

**ROADS****Tindharia, West Bengal, India**

Following an earthquake and heavy rainfall, the Tindharia region suffered a massive landslide, damaging the century-old UNESCO Darjeeling Himalayan Railway and adjacent roads. To restore road and rail traffic and strengthen the ground, Terre Armée India designed and implemented a tailor-made solution involving a series of structures created using the TerraLink® technique to reduce the quantities of backfill that would have otherwise been required using the customer's initial solution.

**TERRE ARMÉE**

#makingyourdayeasier #careforall

**PORTS****Port 2000, Le Havre, France**

Nearly 15 years after its first involvement, Soletanche Bachy is once again working in France's leading container port through its ForSHORE port infrastructure construction subsidiary. The project to construct two new berths - numbers 11 and 12 - and the closing quay will use EXEGY by Soletanche Bachy ultra low carbon concrete. The work also involves many other eco-friendly innovations, from design variants to optimise the quantities of materials used and limit the amount of excavation/backfill required, closed-circuit water management, recycling of used sludge from the diaphragm walling process, and protection for ecosystems.

**SOLETANCHE BACHY**#fostergrowth  
#greenisgreat**AIRPORTS****The Customs Administration of the Czech Republic**

Nuvia has recently signed a major contract to improve security at Czech airports with the installation of radiological surveillance systems. These systems are designed to check passenger entry to, and exit from airside areas, as well as baggage and incoming cargo. Some of the sensors used have also been equipped with neutron detectors. Designed to upgrade security in large-scale public spaces, these unique solutions are integral to the NUVIA Tech Instruments portfolio.

**NUVIA**

#careforall

**URBAN ROADS****Redevelopment of Quay Street in Auckland, New Zealand**

In Auckland, Sixense was involved with the city's project to redevelop the waterfront by widening pavements and cycle paths, optimising traffic lanes and planting many new trees. Sixense used a range of its monitoring systems to measure building and soil movements, provide automated groundwater pressure measurements, monitor and classify noise and vibration in real time, and conduct geophysical tests.

**SIXENSE**

#makingyourdayeasier

**RAILWAYS****Standard Gauge Railway (SGR) line, Dar Es Salaam, Tanzania**

Terre Armée is a contributor to this project to build more than 150 km of rail link between the coastal city of Dar Es Salaam (a major commercial port on the Indian Ocean) and Morogoro further to the west. This design-and-build project involves the construction of more than 3 km of Terre Armée® walls and earth reinforcement. The innovative solution offered to the customer by Terre Armée includes use of steel reinforcement and piling techniques.

**TERRE ARMÉE**#makingyourdayeasier  
#fostergrowth

**RAILWAYS****The HS2 high-speed line, UK**

HS2 is an ambitious project that will eventually become the backbone of the UK rail network. The new high-speed line will link London to cities in the South, Midlands and North, relieving congestion on existing lines, and providing improved services for millions of passengers. Sixense is contributing a range of services to the project, from conventional monitoring systems to satellite monitoring, acoustic and vibration monitoring, construction modelling and impact studies.

**SIXENSE**

#makingyourdayeasier #fostergrowth

**WATER TREATMENT****Annacis Island Wastewater Treatment Plant, Vancouver, Canada**

Soletanche Bachy is contributing to the project to expand the Annacis Island wastewater treatment plant. With a treatment capacity of around 175 million cubic metres per year, it is one of the largest in its region, providing services for up to one million people. The contract covers construction of two 40-metre deep access shafts, two tunnels and pipelines.

**SOLETANCHE BACHY**

#careforall

**PORTS****Port of Alexandria, Egypt**

Around 60% of Egypt's international trade passes through the Port of Alexandria, making this the country's largest commercial port. Completion of the new Berth 55/62 multi-purpose terminal is expected to increase its annual container handling capacity from 15 to 18 million tonnes. Menard is providing soil improvement services for this major project, using a variety of techniques, including prefabricated vertical drains and vibro-compaction.

**MENARD**

#fostergrowth

**ROADS****The Brottonne Bridge, France**

The cable-stayed Brottonne bridge has been carrying traffic over the River Seine between Le Havre and Rouen since 1977. Around 4 million vehicles now use it every year. Freyssinet has recently been involved in maintaining its reinforced concrete piers, which are subject to very substantial external stresses. The work has involved changing some supports, filling cracks to protect the structural steels, installing CFF (Carbon Fibre Fabric) reinforcements, and applying protective paint to all external surfaces.

**FREYSSINET**

#makingyourdayeasier #careforall

**RAILWAYS****Réseau Express Métropolitain (REM), Montreal, Canada**

The Réseau Express Métropolitain (REM) is building an automated metro line to serve the inner suburbs of Montreal. Terre Armée has designed and fabricated all the retaining walls for this new 67 km line, which includes 26 stations. One of the great benefits of the REM, when completed, will be to reduce the journey time between the city centre and its international airport to just 20 minutes.

**TERRE ARMÉE**

#makingyourdayeasier #fostergrowth

**WATER TREATMENT****Arbuckle Reservoir, Texas, USA**

Soletanche Bachy has built a waterproof wall as part of the project to construct a new drinking water reservoir in the Colorado River lower catchment area. This project boasts exemplary environmental credentials, including the fact that the wall was built using low carbon concrete, reducing the carbon emissions generated by its construction by 75%, which equates to 44,000 tonnes of CO<sub>2</sub>. Recycled crushed concrete was also used as a wearing course for access roads and work platforms.

**SOLETANCHE BACHY**#careforall  
#greenisgreat



**MOTORWAYS**  
**Wadi Al Qawr,  
United Arab Emirates**  
Terre Armée was involved in this major project to build a motorway to link the Wadi Al Qawr region to the road between Al Hibab and Nazwa in the north-east of the UAE: 113,000 m<sup>2</sup> of retaining walls and more than 6,000 m<sup>2</sup> of TechSpan® prefabricated arches. This amazing and impressive design-and-build project is already benefiting the economic development of the region and opening up areas previously challenging in terms of access.

**TERRE ARMÉE**  
#makingyourdayeasier  
#fostergrowth



**MOTORWAYS**  
**A16, Rotterdam,  
The Netherlands**  
This new 11 km section of the A16 motorway in the Netherlands is being built between Terbregseplein and the A13 at Rotterdam The Hague Airport. This ambitious project will overfly one of the country's busiest motorway interchanges. Freyssinet actually launched the decks of two viaducts with no interruption to traffic, the first time such an operation has ever been achieved in this country! The teams also worked on pre-stressing of the structures and the installation of bearings and expansion joints.

**FREYSSINET**  
#makingyourdayeasier  
#fostergrowth

**ECOLOGICAL ENGINEERING**  
**Former Joliot Curie laboratories,  
Arcueil, France**  
Nuvia is involved in the deconstruction, remediation, characterisation and treatment of waste from the former Joliot Curie laboratories in Arcueil. Built in 1930 for the Radium Institute, this 5,500 m<sup>2</sup> site includes 1,500 m<sup>2</sup> of buildings and is classified as an ICPE (facility posing a serious danger or inconvenience to the environment). This status, combined with its city centre location, means that the scheduling of the work and the management of the worksite require exceptionally close attention to detail to avoid all disruption and pollution risks to which local residents could potentially be exposed.

**NUVIA**  
#careforall  
#greenisgreat



**MOTORWAYS**  
**Interstate 66, Virginia, USA**  
The state of Virginia has begun work on a massive programme of upgrades to I-66 to relieve traffic congestion and provide for new mobility solutions with a series of projects to create express lanes, new cycle and pedestrian paths, and improve public rapid transit services. Terre Armée has designed and built 186,000 m<sup>2</sup> of Terre Armée® walls, 4.6 km of cornices and 36.6 km of concrete safety barrier elements for this project, one of the biggest contracts in the history of Terre Armée!

**TERRE ARMÉE**  
#makingyourdayeasier #fostergrowth



**ECOLOGICAL ENGINEERING**  
**Former Zachem chemical plant,  
Bydgoszcz, Poland**

This former chemical synthesis production plant closed in 2014. A number of buildings have been demolished since then, but a thorough and complex programme of soil remediation was required before the site could be redeveloped. The fact that this was one of the most heavily polluted sites in Poland meant that the project undertaken by Menard expert subsidiary Remea is one of the largest soil remediation projects ever undertaken in this country. Its innovative 'pump and treat' technique was used to remove all hazardous pollution from the soil and groundwater.

**REMEA (MENARD)**  
#careforall #greenisgreat



## HEALTH & SAFETY

Every day, on all our construction worksites and in all our production facilities, the health and safety of our people is our No. 1 priority. It is also the goal of our Safety First commitment.



Our accident risk prevention culture is built on three cornerstones:

- transparency
- leadership by example
- dialogue

We are all united in working towards our ultimate goal of zero accidents.

**3.5%**

Accident frequency rate\*

\*Number of lost-time occupational accidents x 1,000,000 / total number of hours worked

**0.32%**

Accident severity rate\*

\*Number of days' absence as a result of occupational accidents x 1,000,000 / total number of hours worked

**960,427**

Hours of HSE (Health, Safety & Environment) training

## BUSINESS ETHICS AND COMPLIANCE

In all our operations around the world, we are driven by the same commitment of leading by example in the relationships we have with all our stakeholders.



Whether in terms of business ethics or human rights, we require all our team members to comply fully with all applicable regulations, which are further reinforced by the commitments contained in our Group Ethics and Behaviour Charter, Anti-Corruption Code of Conduct and Manifesto.

The success, development and individual and collective long-term future of our companies depends on strict compliance with shared good practices and commitments that are binding on all of us with no exception.

# ENVIRONMENT AND THE ECOLOGICAL TRANSITION

As contributors to delivering the ecological transition, we are fully committed to reducing the direct impact of our activities.



Our environmental ambition is to:

- take action on climate change
- optimise resources by promoting the circular economy
- protect natural environments.

Every day of every year, we help our customers to reduce their own environmental impact by developing innovations and solutions as the basis for offering new services and applications. So as part of our response to succeeding in the major environmental challenges of the 21<sup>st</sup> century, Soletanche Freyssinet Group companies offer a broad range of technical solutions for soil decontamination, the installation of photovoltaic panels on building facades, the dismantling of nuclear installations, and the construction of pre-stressed concrete wind turbines to capture the power of the highest and strongest winds.



The digital version of this document is compliant with the PDF/UA (ISO 14289-1), WCAG 2.1 level AA and RGAA 4.1 accessibility standards with the exception of the colour criteria. Its design enables people with motor disabilities to browse through this PDF using keyboard commands. Accessible for people with visual impairments, it has been tagged in full, so that it can be transcribed vocally by screen readers using any computer support.

Accessible PDF powered by 

April 2022 — Design: Abmo — Editors: Guillaume Billaroch and Magali Mounier de Vérot.

We thank all the following for their contribution to preparing this report:  
Marie-Pierre Bayle, Marie Belêtre, Marie Brunel, Marie Ducourtif, Sophie Fromion,  
Pauline Grouignet, Richard Loudin, Alexandre Miletitch, Tiphaine Moreau,  
Marie Planchard, Charlotte Renard and Karine Vercher.

Photo credits: Audoin Desforges (p.2,4,5), Freyssinet (p.5,11,15,17,18,21,24),  
Soletanche Bachy (p.10,12,14,22,23,27), JW Ramp (p.11), Nuvia (p.11,21), Sixense (p.12,15,16,19,21,22),  
Zotter Schokolade Marcel Pail (p.13), Menard (p.13,19,20,22,25), Jean-Marie Huron (p.15,16,18,25),  
Terre Armée (p.17,20,21,23,24,25), Cédric Helsly (p.20), Yves Chanoit (p.28), Philippe Beuf (p.26)

Follow us on:



SOLETANCHE FREYSSINET