

Waterproofing Solutions Worldwide



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BMI

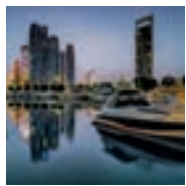
Case Studies Collection

bmigroup.com

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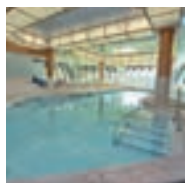
Waterproofing Applications



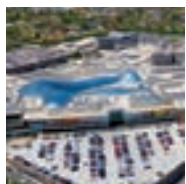
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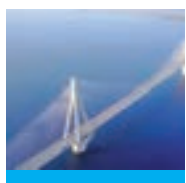
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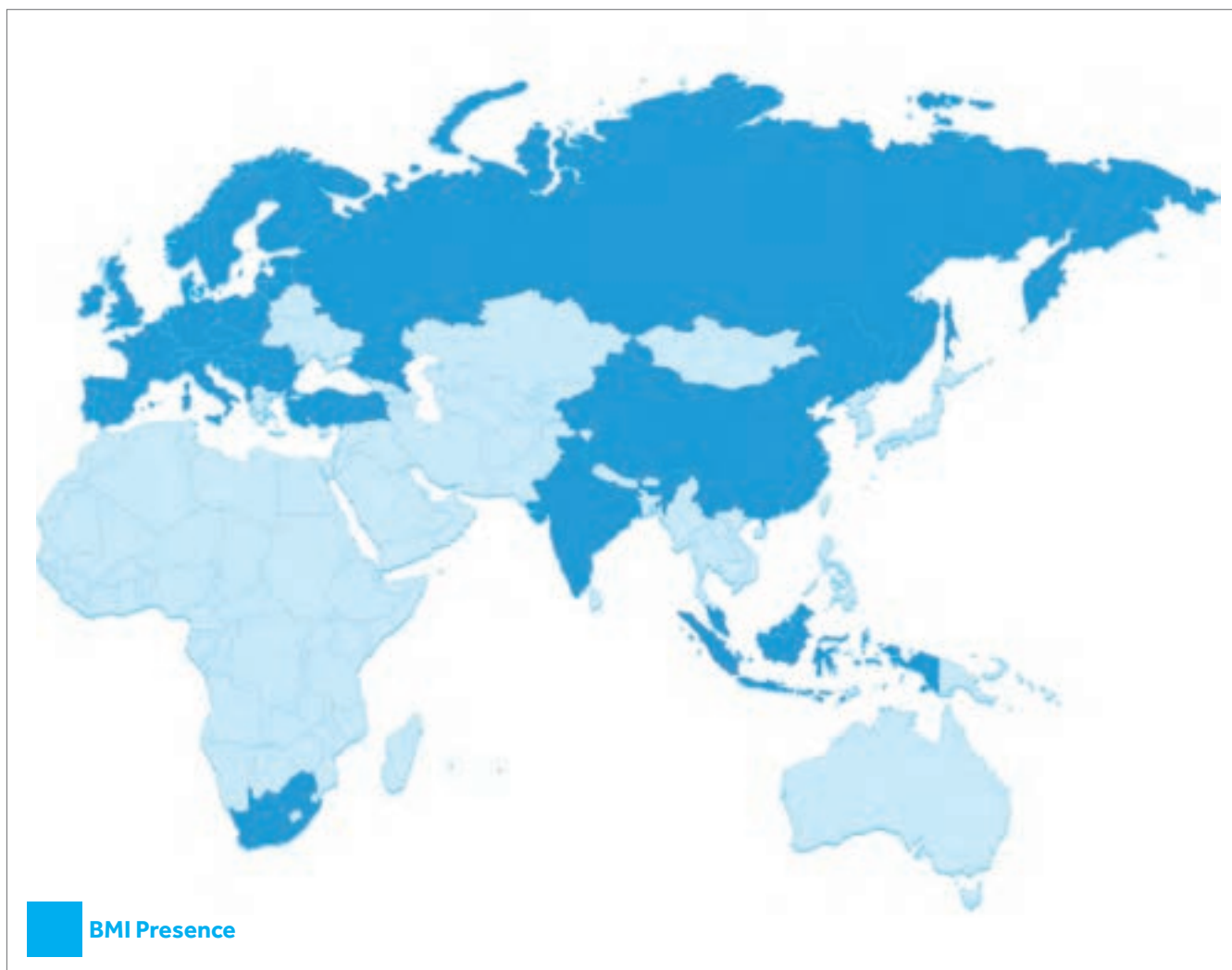


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BMI Group

BMI Group was established following the coming together of **Braas Monier** and **Icopal**. BMI Group is the largest manufacturer of flat and pitched roofing and waterproofing solutions throughout Europe with a significant presence in parts of Asia and Africa and over 150 years of experience.

BMI Group is part of Standard Industries, the world's largest roofing and waterproofing manufacturer. A global business specialising in buildings materials for today's and tomorrow's needs.



Fast facts about BMI

Established in 1852

9.600 employees

120 Manufacturing facilities

Operations in 40 countries worldwide

R&D facilities in 4 countries

Headquarters -London, UK

Bringing together the expertise of several leading brands, BMI is a new name, backed up with years of local experience and knowledge – and all united in delivering excellence for our customers.

Sharing Standard Industries' commitment to anticipating future needs and unlocking possibilities, we take a truly unique perspective.

We don't see a project for what it is, but for what it could become and how it can help inspire closer communities, build better businesses and enhance the lives of everyone.

Our high-tech solutions and expertise for building and civil engineering waterproofing is built on long-term experience with many prestigious references world-wide.

Whatever the project, BMI delivers innovative and imaginative solutions for buildings and infrastructures, enabled by an extensive portfolio of technologies, which allow us to resolve customers' complex challenges.

Bitumen Membranes

BMI **ICOPAL**

BMI **VEDAG**

BMI **Siplast**

BMI **VILLAS**

Synthetic Membranes

BMI **EVERGUARD**

BMI **WOLFIN**

Liquid-Applied Membranes

BMI **Sealoflex**

BMI Expert : from design to execution



Understand customer needs

- Work closely with specifiers
- Understand project requirements



Define the best solution

- Offer tailor-made solutions and logistic services
- Define technical specifications



Train the installers

- Technical training
- Certification of installers
- Provide tailored training programs



Provide support

- On-site support
- Projects follow-up



On site technical support

A team of technical experts is committed to find the solutions you need, support the installers and follow up every single stage of the project.



BMI Academy

A network of training centres to provide the most up-to-date technical expertise in the roofing and waterproofing industry.

BMI training centres



The training you need

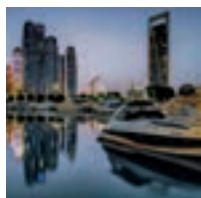
Learn about :

- Waterproofing requirements
- Product range and solutions
- Technical installation

We provide custom-tailored trainings for architects, engineers, installers, distributors for a comprehensive knowledge of the diverse waterproofing solutions.



Waterproofing Applications



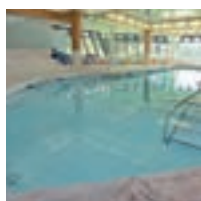
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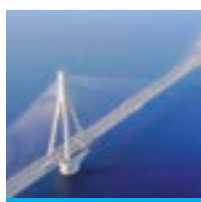
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Civil Engineering Geomembranes

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Underground and Tanking



Preventing the ingress of water or damp into underground premises is a challenge often faced by inhabitants and building constructors. It needs to be taken into consideration from design stage onwards. There are many complex challenges to face as there are many possible sources of unwanted moisture.

At BMI, we are very experienced in working on highly complex projects (hotels, car parks, hospitals, for example...).

We have a broad range of solutions with several technologies: bitumen, synthetic and liquid to answer any waterproofing need.



BMI SOLUTIONS

BMI innovative single layer geomembrane: TERANAP TP for high water pressure underground. BMI is also leading the radon protection market with its Monarflex product range.

Underground and Tanking Case Study



Eagles Hills Belgrade Serbia

Location: Belgrade, Serbia

Building: Residential

Type: Foundations

Size: 22.000 sqm

Solution: BMI Wolfin PVC membrane

WHY BMI?

BMI was selected as the main partner because of the successful track record in the design of complex waterproofing solutions.



CHALLENGES

BMI provided a solution that no one else could: a membrane laid directly on gravel, below concrete plates and connected to 420 pile heads and 278 diaphragms.

SUPPORT PROVIDED BY BMI

BMI provided support during each stage of the project, finalizing the tender docs, supervising the installation works, advising on the application details and performing the final quality checks to ensure the perfect watertightness of the solution.



Podium / Plaza decks



Modern urban buildings incorporate landscaped areas and roofs commonly known as podiums or plaza decks. In order to maximize space utilisation creating friendly areas with multiple usage such as pedestrian terraces and gardens, leisure spaces, basement car parkings...
Of course, plaza deck applications create significant waterproofing challenges.

Based on the usage of the podium, the structure is exposed to different stress factors such as water, moisture, root effects, structural movements due to traffic and also contaminants. Plaza decks are complex areas with many interconnections. That is why it is vital to choose the correct waterproofing systems to prevent any type of structural failure.

BMI PODIUM WATERPROOFING ADVANTAGES

- **Smart design solutions:** BMI technical team supports architects and building designers to choose the best system for their application.
- **Durable building protection** against water degradation
- **High hydrostatic pressure resistance**
- **Multi technology use** for “full compatibility of materials”
- **High chemical & anti-root resistance**
- **High mechanical performance**
- **Partitioning possibilities**, i.e. limit the area of possible leakage
- **Possibility of easy repairing work** by injection on limited areas
- **Solutions for expansion joints**
- **Solutions for all podium usages**, car parking, landscaped areas, pedestrian decks...

BMI waterproofing systems can be used either on insulated or non-insulated applications



BMI WATERPROOFING SOLUTIONS

BMI offers premium podium/plaza deck waterproofing systems which can accommodate all types of usage and finishing: pedestrian green areas, blue roofs, access for light vehicles, inaccessible areas with gravel or self-protected...

Podium / Plaza decks

Case Study



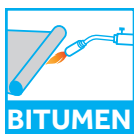
L'Oréal Headquarters France

Location: Paris, France

Building: Offices

Roof type: Flat roof, Green roof,
concrete deck

Solution: BMI Siplast Canopia range



WHY BMI?

The state-of-the-art BMI Siplast Waterproof system provides a durable solution and allows the growth of a beautiful flora using a water-retention system.

Nidarroof alveolar plates helped to manage the rate of water flow by providing a stabilising substrate with an integrated honeycomb sheet that temporarily retains rainwater.



CHALLENGES

The building had to meet the highest standards of sustainable architecture both in terms of aesthetics and performance.

In addition to its aesthetic appeal, the green roof provides a reliable, low-maintenance solution that makes a huge contribution to the building's overall environmental profile through its excellent thermal performance and ecological water management.



Wet areas and Balconies



In every building whether commercial or housing, "wet rooms" can be a source of leakage and create major damages. Often these rooms have small dimensions, are difficult to access and have many penetrations and details. Due to such complexity, Liquid Applied Waterproofing system (LAW) is the best answer to water protection.

AREAS OF APPLICATION

- Kitchens
 - Bathrooms
 - Toilets
 - Technical rooms
 - Balconies
 - Swimming pools
-



BENEFITS

The benefits of the BMI Liquid Applied Waterproofing systems are:

- Durable building protection against water degradation
 - Smartly designed technical solutions
 - High waterproofing performance with multiple coating layers
 - High chemical resistance
 - High mechanical performance
 - Solutions for expansion joints
 - Polyurethane proven technology
-



Wet areas and Balconies

Case Study



Hotel Barriere La Baule France

Location: La Baule, France

Building: Hotel

Type: Pool

Solution: BMI Siplast Parathane



WHY BMI?

To renovate the swimming pool's waterproofing layer, the engineers opted for the BMI liquid waterproofing system Parathane, due to the extreme adaptability to the irregular shapes of the different pool areas.



Roofs



EVERY ROOF IS DIFFERENT - BUT THEY ALL START WITH THE CUSTOMER

Whether it is exposed or ballasted, traditionally built or iconically designed, BMI offers a solution for each type of roof. Using state of the art technologies and leveraging decades of experience, BMI developed an extensive portfolio of systems & solutions to resolve customers' complex challenges in residential & non-residential roofing projects. Whether it's a concrete, steel or wooden structure, BMI offers complete roofing systems based on bitumen, synthetics and liquids technologies fulfilling all climates conditions.

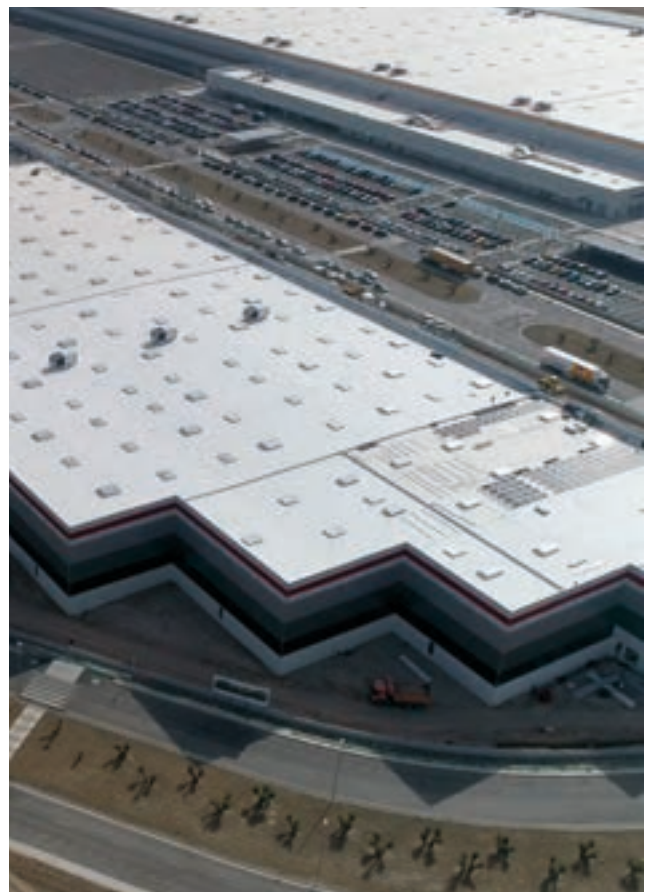


ASK MORE FROM YOUR ROOF

Whether it's for new build or refurbishment, we don't just give households a roof that will shelter and protect them for the years to come. We also help to create a unique blend of form, function, architectural beauty and active performance.

MEETING YOUR NEEDS: COMPLETE SYSTEM SOLUTIONS

Our philosophy is to look beyond just products. Individually, our products offer exceptional performance. Working together, they offer unrivalled reliability and excellence. That's why we are committed to developing complete and integrated systems which combine technologies, products, components and accessories with technical support, services, training and guarantees. Tailored to answer specific needs, our roofing solutions guarantee peace of mind at each stage of the project - from specification and installation throughout the full lifetime of the roof. We ensure the perfect match of form, function and performance.



Roofs Case Study



Mountain Resort Edelweiss Austria

Location: Salzburg, Austria

Building: Hotel

Roof type: Flat Roof, Green Roof

Solution: BMI Villas bitumen membrane

WHY BMI?

BMI's solution perfectly matched the performance requirements defined for the building.



© DAS EDELWEISS - Michael Hube



© DAS EDELWEISS - Michael Hube

Roofs Case Study



Hall des Sports Guyane

Location: Guyane,
Building: Sport complex
including football and hockey arena
Roof type: Metal deck
Solution: BMI Monarplan PVC membrane



WHY BMI?

BMI Monarplan FM proved to be the best solution for the specific design of the roof characterised by distinctive curves.



CHALLENGES

Regarding the extreme climatic conditions in the tropical region: high UV and very strong rains, the MONARPLAN membrane is the perfect solution to match the exigences gathering a white membrane with high reflectivity and a performing solution for the building special shapes.



Roofs Case Study



Hotel Hilton Amsterdam

Location: Amsterdam, Netherlands

Building: Hotel

Roof type: Flat roof

Size: 40.000 sqm

Solution: BMI Esha, root-resistant APP modified bitumen membrane and BMI Siplast Noxite depolluting membrane



WHY BMI?

The Noxite roofing solution purifies harmful NOx particles from the air.

Due to this particular property, it was chosen to cover the roof of the Hilton Hotel, located in the proximity of an airport and busy roads. Polluted areas represent the ideal locations to benefit from the Noxite solution.

The lower roofs are covered with a root-resistant covering, suitable for a future roof garden.



SUPPORT PROVIDED BY BMI

Technical support, installation advice .

Roofs

Case Study



Warehouse Illescas Spain

Location: Toledo, Spain

Building: Warehouse

Roof type: Flat roof, steel deck

Size: 130.000 sqm

Solution: BMI Everguard TPO

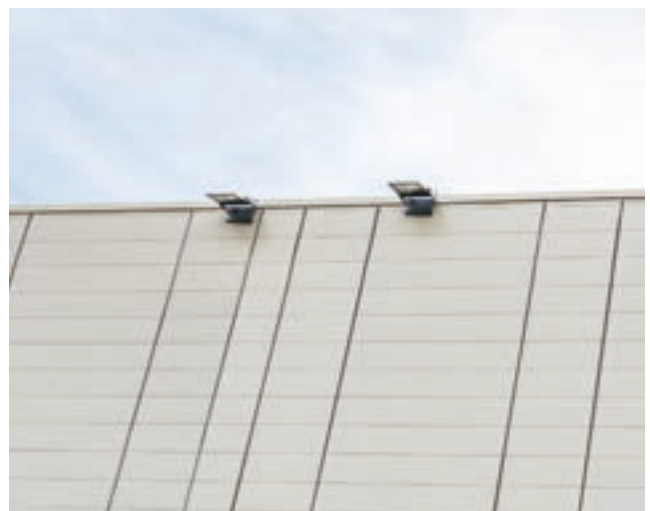


WHY BMI?

The BMI solution was chosen due to the extreme durability and high UV reflectivity. The Everguard TPO membrane is windproof and can withstand the most diverse climate conditions for a long period of time.

The high SRI (Solar Reflectance Index) achieving a value of 94 improves the energy performance of the building.

The Everguard TPO membrane is easy and quick to install, allowing a significant time saving.



SUPPORT PROVIDED BY BMI

The BMI's technical team provided support during each stage of the project from the specification to the installation, supervising each phase of the execution.

Roofs Case Study



Massalikoul Djinane Mosque Senegal

Location: Dakar, Senegal

Building: Mosque

Roof type: Flat roof and Domes, concrete deck

Solution: BMI Siplast Parathane liquid solution

WHY BMI?

BMI provided the certification for each product and for the full system. The Parathane liquid applied solution was used in combination with the Parafor Solo GS insulation system.



SUPPORT PROVIDED BY BMI

The BMI technical team provided on-site assistance during the most critical stages of the project.



Sustainable Roofs



THE ROOF AS THE BIGGEST UNTAPPED RESOURCE

At BMI Group, we believe a roof can offer so much more. From materials that absorb pollution, to roofs that turn into gardens and living spaces — our active roof solutions are transforming urban areas. The possibilities are endless. We're here to help people find the perfect solution for their homes and workplaces. Topping your buildings with green spaces isn't just a fad. Whether it's gardens or micro-farms, transforming roof assets into nature-rich areas has a significant influence on employee happiness and productivity as well as on the inhabitants and their well-being at home.



GET SMARTER WITH WATER MANAGEMENT - IT'S NOT ONLY ABOUT GREEN

Flood threats caused by climate change and increasing urbanisation call for innovative ways to manage rain water. And with government policies regulating the volume of rain water released into sewer systems, water management is more challenging than ever. BMI Blue Roof designs, with open cell layers to create rain water containing buffers, regulate flow to the ground drainage system. This transfer of water storage from ground to roof saves land square meterage and opens up endless possibilities; from re-use of water for gardens to sports roofs which are ready to use even directly after rainfall.

IMPROVE AIR QUALITY

A 1.000 m² Noxite enhanced roof can degrade up to 620.000 g of nitrogen oxide over 20 years. That's the equivalent of taking 20 trucks, each driving 150.000 miles a year, off the road. Garden and farm roofs also capture CO₂, creating cleaner microclimates and healthier communities.



Sustainable Roofs Case Study



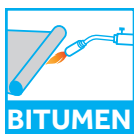
L'Oréal Headquarters France

Location: Paris, France

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concrete deck

Solution: BMI Siplast Canopia range



WHY BMI?

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CHALLENGES

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In addition to its aesthetic appeal, the green roof provides a reliable, low-maintenance solution that makes a huge contribution to the building's overall environmental profile through its excellent thermal performance and ecological water management.



Sustainable Roofs Case Study



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Mountain Resort Feuerberg Austria

Location: Feuerberg, Austria

Building: Hotel

Roof type: Green roof, Park deck

Solution: BMI Villas bitumen membrane



WHY BMI?

BMI benefits from strong brand awareness, high customer's satisfaction and outstanding track record in product's quality.

BMI Villas' products are known to architects and planners for being particularly suitable for the climate conditions of the alpine region. The positive experience with past projects led the architect to choose the BMI Villas system for this remarkable and challenging project.



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© MOUNTAIN RESORT FEUERBERG - Stephan Pfitzner

SUPPORT PROVIDED BY BMI

Extensive technical advice in every new planning phase of the project by the regional BMI project consultant.



Sustainable Roofs Case Study



Malmö Live Sweden

Location: Malmö, Sweden

Building: Hotel, Congress and Concert Halls

Roof type: Green roof

Solution: BMI Icopal bitumen membrane



WHY BMI?

The award winning complex obtained the LEED Platinum certification. BMI's green roof solution contributed to achieving the high environmental standards required for the certification.

A complete bitumen-based 1-layer system was mounted under the sedum layer to protect the underlying structure from moisture and chemicals.

The green roof solution allows Malmö Live to combine contemporary design with sustainability.



CHALLENGES

Hard-to-reach construction site. Malmö Live is a 25-storey building located in the heart of Malmö. Due to limited storage space, each delivery required accurate and timely planning (usually at evenings) and the material had to be lifted up 85 meters high.



Bridges & Tunnels



BMI is a leading manufacturer of waterproofing solutions for key road and rail infrastructure including bridges, tunnels and car parks. Our high-quality, prefabricated membranes have been used on some of the biggest bridge decks across the world, helping to enhance their durability and extend their lifespan. BMI solutions offer outstanding mechanical strength, are suitable for use on both new and existing surfaces and can either be manually or mechanically torched in place.

BMI were among the first companies to deliver full systems to waterproof road and rail bridges, building the foundation for regulation in almost every country. Our strong technical support staff can offer you the right system for your bridge with strong local product names such as Vedapont, Isovill, Mistral C, Parafor ponts and Supermost. In addition to our hardwearing road bridge membranes, we offer solutions specifically developed for railway bridges such as Mistral C, a membrane used across 80% of the structures on the latest TGV high speed rail line in France.



BMI SOLUTIONS

Our bitumen geomembranes Teranap provide an easy to apply and effective solution in cut-and-cover applications.

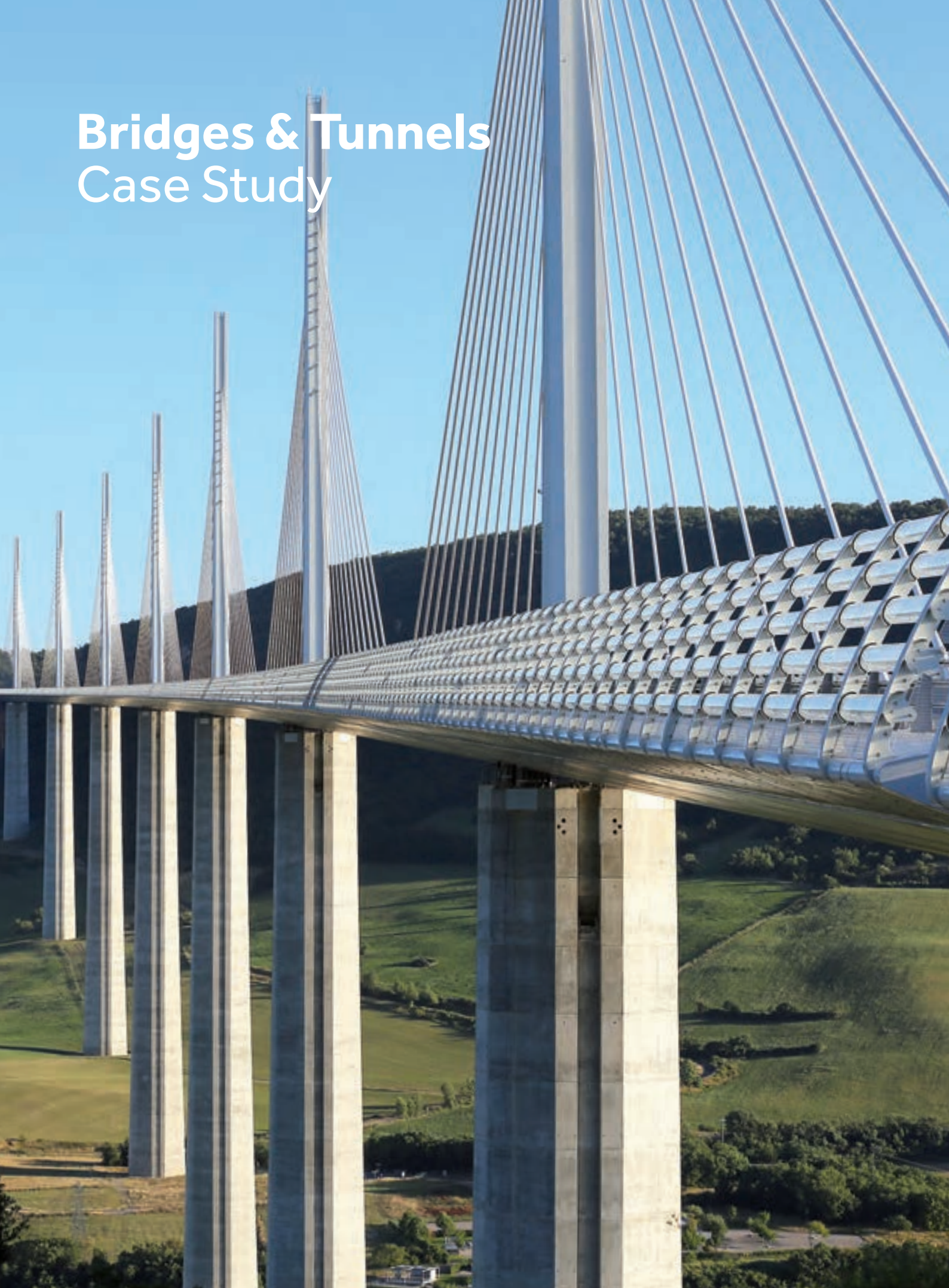
The flexible material can be easily moulded to the shape of the underlying concrete and anchored in place. The membranes are resistant to chemicals and offer excellent mechanical properties, helping to reduce corrosion and long-term maintenance requirements.

The 4 m wide roll enables an efficient and fast installation process.

Our special technology to seal and proof the joints gives security and peace of mind to the contractor and the end user.

Bridges & Tunnels

Case Study



Millau Viaduc France

Location: Millau, France

Type: Bridge, Concrete deck

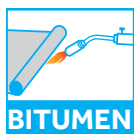
Type: Concrete deck

Size: 65.000 sqm

Solution: BMI Siplast Parafor Ponts

WHY BMI?

BMI Siplast was able to provide a tailored solution which could be installed in 7 weeks, fulfilling the rigorous planning required by the project.



CHALLENGES

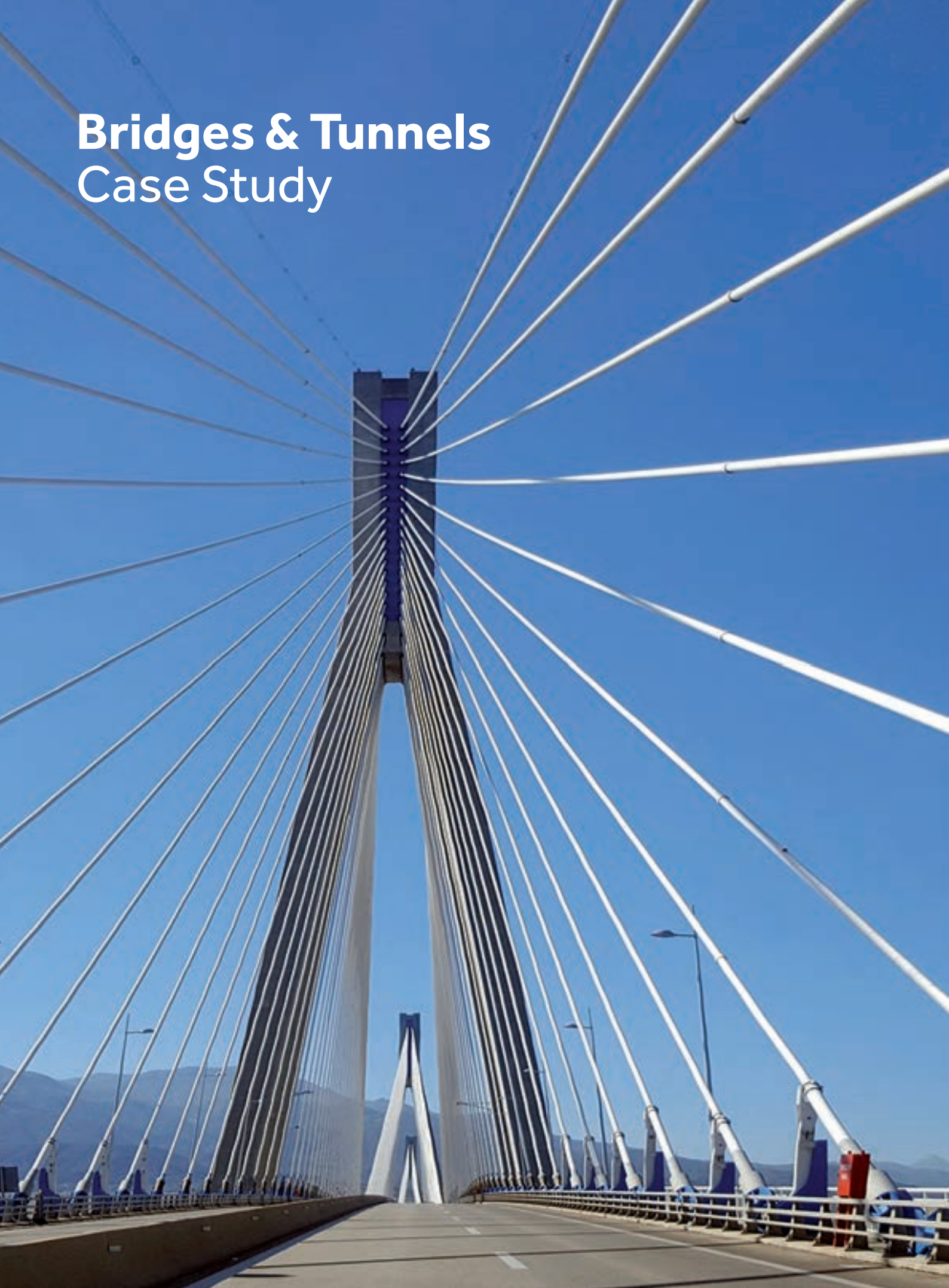
The Millau Bridge is in southern France and crosses the Tarn River in the Massif Central mountains. It is part of the A75 Motorway.

The structure is a cable-stayed bridge. The large surface of the bridge required a solution to ease the installation and save time during execution.

To this purpose, BMI supplied two machines which ensured the correct installation of the membrane at a speed of 1.500 to 2.200 sqm a day.



Bridges & Tunnels Case Study



Rio-Antirrio Bridge Greece

Location: Rio-Antirrio, Greece

Type: Bridge, Concrete deck

Type: Concrete deck

Size: 55.000 sqm

Solution: Tailored solution developed
with the construction company,
auto adhesive membrane



WHY BMI?

The strong partnership between BMI Siplast and its local partner was key for the success of the project.

The long-term experience and deep technical expertise enabled BMI to develop a custom-tailored solution to reduce time of execution and ensure a smooth and faultless installation. The auto-adhesive membrane, cold-installed, allowed to lay up to 3000 sqm in a single day.



CHALLENGES

The Rio-Antirrio Bridge is one of the world's longest multi-span cable-stayed bridges and longest of the fully suspended type (3.500 m). Due to the extraordinary complexity of the project, BMI had to develop a tailored solution to match the project's demanding requirements. Speed of execution and high levels of workmanship were key to successfully completing the project.



Bridges & Tunnels

Case Study



La Crête Cut-and-Cover Section France

Location: Perigord France

Type: Tunnels and motorway

Size: 10.000 sqm

Solution: BMI Siplast Teranap bitumen
Geomembrane



WHY BMI?

The A89 autoroute is an East-west highway in central France known also as the "La Transeuropéenne". The A89 highway crosses the beautiful hilly region of Perigord, so, to preserve the natural landscape of the French department, it was decided to build several tunnels, one of which is named la Crête. In order to fulfill the technical requirements of AFTES (the French association of tunnels and underground structures), a partitioned waterproofing solution was required. Moreover the solution was expected to provide an extreme resistance to aggressive agents as well as withstand the weight of the embankment.

BMI's TERANAP TP solution, particularly resistant to puncturing, satisfied the project's demanding requirements and was selected to waterproof the 10.000 sqm of the tunnel.



CHALLENGES

Due to the curvature of the tunnel, the waterproofing was made with TERANAP 431 TP, a high performance elastomeric bituminous geomembrane. Teranap 431 combines SBS polymer and the highest quality asphalt with puncture resistant polyester reinforcements (two layers of geotextile of 700 and 1500 g/sqm). The partitioning was made on a surface of 320sqm on average using the Parafor Solo S membrane.



Civil Engineering Geomembranes



Unique waterproofing system for civil engineering works. Teranap TP elastomeric bitumen geomembrane provides an industrial solution to waterproof dams, canals or basins. BMI offers a complete range of geomembranes, associated with solutions to drain and to protect and provides support to contractors and contracting firms to design watertight systems to ensure the reliability and longevity of the structures.

AREAS OF APPLICATION

- Mine waste and landfills.
 - Waste containment, tailing ponds, heap leach
 - Hydraulic projects: irrigation canals, dams, industrial reservoirs
 - Transportation Infrastructure: tunnels
-



BMI SOLUTIONS

Our knowledge and expertise developed during several decades worldwide, allow us to bring the best technical support to our partners. We provide tailored solutions, adapted to any requirements or specific requests.

BMI Siplast was the first bitumen geomembrane manufacturer.

The production started in 1974 in Mondoubleau, France. Today, a whole production line is fully dedicated to geomembranes.

Teranap is a geomembrane manufactured from SBS elastomeric bitumen reinforced with a non-woven polyester geotextile. The underside, covered with a polyester film, is resistant to root penetration.

The surface is coated with silica sand.

Civil Engineering Geomembranes Case Study



Al Boqaata Lebanon

Location: Al Boqaata, Lebanon.

Type: basin waterproofing

Size: 500.000 sqm

Solution: BMI Siplast Teranap bitumen
geomembrane



WHY BMI?

BMI's technical team worked closely with the construction company to develop a methodology, and an installation guide for the project.

In February 2019, a large mock-up (3.500 sqm) of the complete system developed by BMI was installed on site to check the performance of the solution under real conditions and train the local installers. Finally, the solution was approved and the order for 200.000 sqm (the first phase) was placed in May 2019.



CHALLENGES

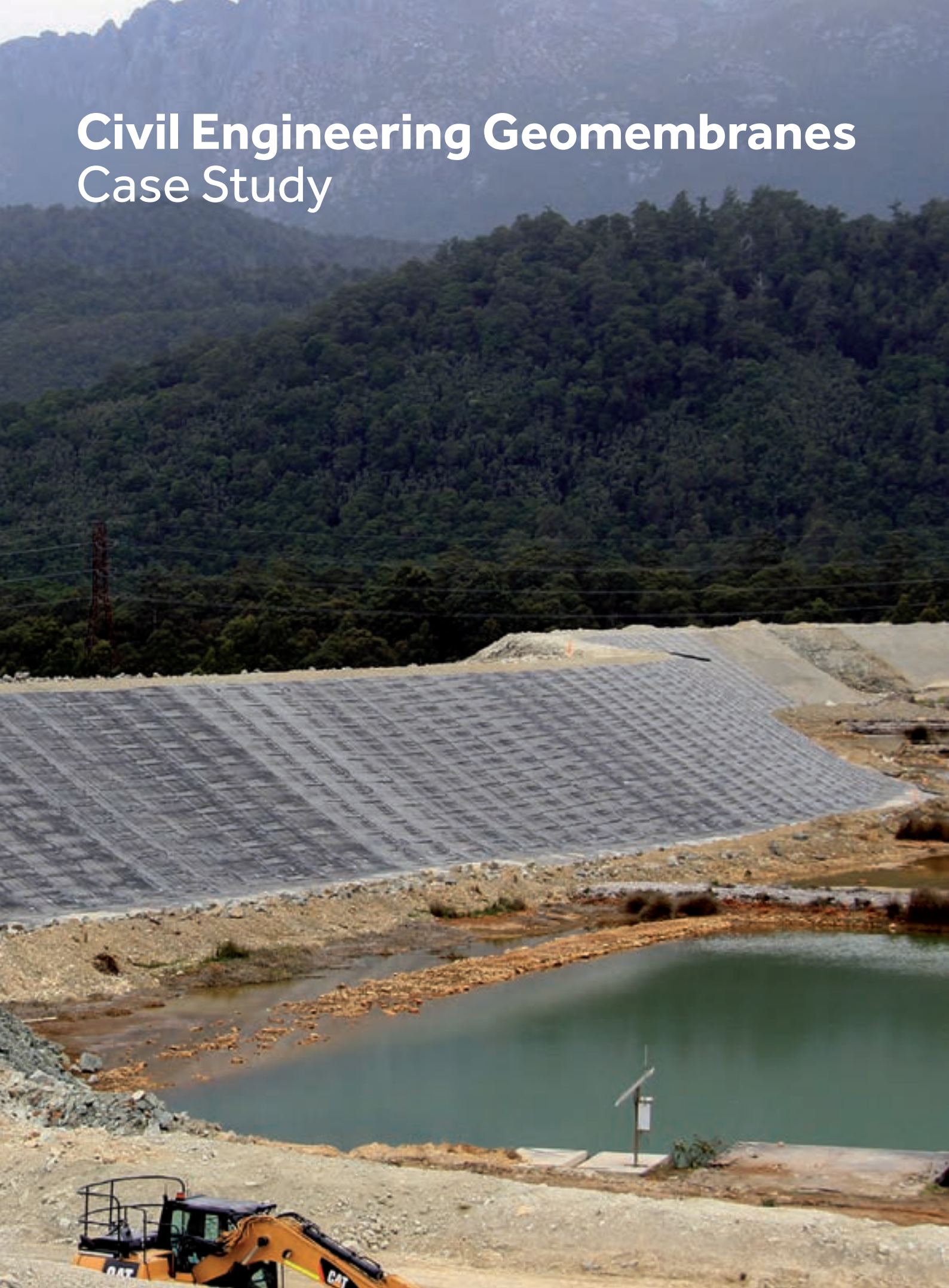
The remarkable height of the dam (70 meters) required the execution of specific product tests by a qualified external laboratory to guarantee the watertightness of the geomembrane under the operating conditions. Siplast's Teranap passed the test successfully withstanding a pressure of at least 10 bars.

SUPPORT PROVIDED BY BMI

A group of three professional installers was trained at the BMI Academy in Mondoubleau, France, on the application techniques of bitumen geomembranes to ensure the correct installation on site.



Civil Engineering Geomembranes Case Study



Rosebery Mine Tasmania

Location: Rosebery, Tasmania

Type: Mining

Size: 190.000 sqm

Solution: BMI Siplast Teranap bitumen
geomembrane

WHY BMI?

Teranap was chosen for the project because of its weldability and flexibility to conform to irregular shapes and surface conditions. The customer installed 190.000 sqm net area of the Teranap liner and 250.000 sqm of upper and lower cushioning geotextile.



CHALLENGES

The conditions during construction were challenging, with over 1 m of rain during the first month alone, high wind events, and even snow. When conditions allowed, 6.000 sqm of Teranap was installed on the slope in just a single day.

In every instance on site where the liner was placed under tension for various reasons, there was no observed failure of any welded seam.

Hotel de Ville - Paris

Green Roof





CUSTOMER SERVICE:

We'd be very pleased to understand your project requirements;
please do email us and we will put you in contact with the best person to help you understand
how our market-leading solutions can benefit you.

contact.international@bmigroup.com

www.bmigroup.com