

# New Estonia Museum Design Protects Cultural Artifacts

PREPRUFE® protects cultural artifacts with high performance waterproofing.

Project	Estonia Art Museum
Investor	Riigi Kinnisvara AS
Engineer	Novarc Group AS
Architect	Dan Dorell, Lina Ghotmeh, Tsuyoshi Tane
Contractor	Fund Ehitus AS
Applicator	Langeproon Hüdrosolatsioonitööd OÜ
GCP Solution	PREPRUFE®, BITUSTIK™, BITUTHENE®



## Project Profile

### Securing world-class artifacts

The new £40 million Estonia National Museum signals a new era in construction for the country, combining contemporary museum design elements and sustainability with cultural significance.

Designed by architects Dorell Ghotmeh Tane and built by Fund Ehitus OU, the 34,000m<sup>2</sup> building will play a key role in the regeneration of Tartu, Estonia's second largest city. The arts building will be home to more than one million artifacts, which celebrate the history, traditions, and culture of Estonia.

With the specification of PREPRUFE<sup>®</sup> waterproofing from GCP, the stylish and modern Estonia National Museum—as well as its priceless, culturally historical contents—will be protected from water ingress and damage for generations to come.

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### Supporting critical waterproofing needs

Built on the site of a former Soviet military base, the new building's basement is subjected to 4-5 meters of hydrostatic water pressure, and has more than 30,000 penetration points from reinforcement bars and pipes.

To ensure the basement remains dry and keeps the historical artifacts at a consistent temperature and relative humidity, a proven waterproofing system was a prerequisite for the museum design.

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### Providing sustainable waterproofing

With long-term waterproofing performance, reliability, and success at challenging projects worldwide, PREPRUFE<sup>®</sup> waterproofing offered the ideal protection for the museum's 6-meter deep basement filled with arts and culturally significant artifacts. PREPRUFE<sup>®</sup> is an advanced membrane system, designed with synthetic adhesive layers and GCP's patented ADVANCED BOND TECHNOLOGY™.

This unique technology enables concrete to aggressively adhere to the PREPRUFE® membrane, forming a unique, intimate seal that prevents any water migration between the waterproofing and the structure, reducing the risk of leaks and improving sustainability.

Utilizing an advanced acrylic surface coating developed by GCP, the PREPRUFE® membrane also simplified the installation process by removing multiple layers and complicated detailing. Protective layers of concrete or boards were eliminated, reducing the depth of excavation and spoil and minimizing the number of materials to be sourced. This accelerated project completion.

GCP also supplied a range of complementary products and systems, including BITUTHENE®4000S self-adhesive HDPE waterproofing membrane and BITUTHENE®LM asphalt modified liquid membrane, to improve the museum design. BITUSTIK™ 4000 double-sided tape was also supplied to complete the project's comprehensive waterproofing specification.

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