StoraEnso

Myrane Idrettshall og Svømmeanlegg Kleppestø, Norway

The Myrane Idrettshall og Svømmeanlegg, a landmark project for Askøy Municipality, Vestland county, Norway is spearheaded by Backe Bergen AS. This ambitious venture is set to redefine the community space with low-carbon emission materials and construction methods.

Situated on the southern coast of the island of Askøy, Kleppestø is connected to the city of Bergen by the Askøy Bridge. The village is known for its picturesque landscapes and proximity to the fjords, offering a blend of natural beauty and modern amenities. With a population of around 24,400 residents, the town is a vital hub for the local community, providing essential services and facilities, including the new Myrane Idrettshall og Svømmeanlegg - a community sports hall and swimming facility.

The facility is designed with a focus on minimising operating and maintenance costs, within a total investment framework of NOK 638 million. It aims to be an attractive, identity-creating space with high-quality architectural design. The outdoor area is tailored for recreation, featuring blue-green spaces that enhance the community's connection to nature.

The facility will boast a range of amenities, including two sports halls with varying ceiling heights, a climbing hall, a swimming pool with six lanes, a training pool with height-lifting capabilities, a strength training room, and a larger common area with reception and meeting facilities. These features are designed to cater to diverse community needs, fostering a vibrant and active environment.

Collaboration

The project is a collaborative effort involving several key players. Asplan Viak is the designer, ensuring the architectural integrity and aesthetic appeal of the facility. GK Norway is responsible for ventilation, electrical systems, and building automation, while Chr. M. Vestrheim is responsible for the pipes, sanitation, and heating. Ny Struktur is the Timber Engineer. This synergy among experts has been crucial in navigating the project's complexities and ensuring its success with Backe Bergen AS the main contractor.

Sustainable design and prefabrication

A key feature of Myrane Idrettshall og Svømmeanlegg is its use of prefabricated Sylva™ CLT Floors and Roofs. The kit of parts significantly streamlined the construction process, offering both environmental and practical benefits. The material has a very low carbon footprint and has reduced the building's dependence on the use of concrete and steel which have a much higher carbon footprint. The Sylva elements only generated 11 tonnes of greenhouse gases (CO_2e) to manufacture and 4 tonnes of CO_2e to transport. Compared to the 161 tonnes of carbon dioxide that the trees removed while growing and will store in the building, this amount is a small fraction. Choosing Sylva CLT elements instead of non-renewables avoided 242 tonnes of greenhouse gases.

Source: Stora Enso Carbon Calculator.

Services

This project also leveraged the use of Stora Enso's Sylva™ Services and preinstalled lifting devices in their mill's factory-controlled conditions, so when the elements arrive on-site, they were ready to install safely, immediately.

Origin of the wood

The Sylva™ elements were made with wood sourced from PEFC-certified forests, ensuring that the timber used comes from sustainably managed forests. PEFC is one of the most trusted and widely recognised certifications for sustainable forest management.

Advanced energy solutions

Operational energy efficiency is also a cornerstone of this project. The building will be connected to district heating and waste suction systems, with 20 energy wells drilled and solar cells installed on the roof. A solar cell system with a maximum power supply limit of 100 kW is said to be established, ensuring sustainable energy use. Room and pool heating, along with post-heating of ventilation air, will be managed via propane heat pumps connected to energy wells and heat recovery systems.

Moisture management

Through a research project in collaboration with Askøy kommune, Asplan Viak AS, Energy Control, Backe Entreprenør and Western Norway University of Applied Sciences, temperature and moisture meters were installed at critical points in the outer roof and exterior wall.

Learn more about moisture management with Sylva in this short video.

Construction timeline

Initiated in August 2021, the project is slated for completion by the start of the school year in 2026. The planning phase, encompassing concept development, sketching, and preliminary project work, extended until the summer of 2023. Detailed design commenced thereafter, with site clearing and demolition beginning in October 2023, followed by groundwork in January 2024.

About the architect

Asplan Viak is one of Norway's leading multidisciplinary consulting firms, specializing in architecture, engineering, and planning. With over 1,300 employees across 32 offices. The firm is dedicated to creating sustainable solutions for both public and private clients. In addition to their work on the Myrane Idrettshall og Svømmeanlegg, Stora Enso supplied a Sylva™ kit of parts for the Tøyenbadet Swimming Pool in Oslo also designed by Asplan Viak.

About the main contractor

Backe Bergen AS is a reputable construction company based in Bergen, Norway. Established in 2010, it operates as part of the larger Backe Entreprenør AS Group. Known for its commitment to quality, Backe Bergen AS specializes in a wide range of construction projects, including residential buildings, commercial properties, and public infrastructure. The company prides itself on delivering projects on time and within budget with a low carbon footprint.

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General

Delivery year

Under Construction

Building type

Health

Area (m²)

9,719

Units

1

Photo credit: ©Backe

Products

Products and Services

Sylva™ CLT Floors and Roofs, Preinserted lifting devices

Product quality

PEFC Certified Wood | INV Surface Grade

Product volume (m³)

212

Team

Developer

Askøy kommune

Architect

Asplan Viak

MEP Designer

Vestrheim AS
GK Norway

Main contractor

Backe Bergen AS

Timber Engineer

Ny Struktur AS