

# Salt & sand

Innovative fabric buildings







## The ideal salt & sand storage solution.

Rubb's salt and sand storage buildings offer an effective alternative to wooden and metal bulk storage facilities. Retaining walls can be customized as needed or Rubb's innovative BulkBlock™ foundation system can be integrated to increase material storage capacity.

Rubb salt and sand storage buildings are engineered and detailed to exacting standards. The materials and methods incorporated into our product are chosen to provide a structure with an expected life of over 20 years with minimal to no long-term maintenance.

Rubb utilizes the best corrosion protection available to maximize building longevity, with post-production hot dip galvanization to the ASTM A-123 standard.

Our bulk storage facilities can be designed with various sized door openings (fully enclosed) or with open gable ends (partially enclosed) depending upon customer preference and operational needs.

Rubb salt storage buildings are proven to hold up in difficult environmental and corrosive conditions, making them the ideal containment solution.



# Advantages



## Low maintenance and costs

Our high-quality membrane materials and post-production galvanized welded frames deliver durability over time, making the cost of maintaining Rubb buildings more economical compared to conventional structures.



## Energy-efficient roof membranes

Translucent membranes allow natural daylight to illuminate the workspace while the white roof surface reflects heat. Thermohall® insulation can minimise heat transfer, prevents condensation and virtually eliminates thermal bridging and air infiltration.



## Structure quality

All structures are code complaint, designed to meet wind and snow loadings of its geographical location. Rubb PVC fabric cladding has a manufacturer's warranty of 10 years. Steelwork is hot dip galvanized in post production to eliminate any chance of corrosion, and comes with a 25-year warranty.



## Multiple door options

Rubb offers a variety of different door solutions. They can be selected and designed to suit many size and opening requirements. This flexibility ensures that our clients get the best option for their selected Rubb building type, depending on their operational needs.



## Complete environmental control

The membrane cladding of a Rubb building is continuously sealed to provide a weather-tight shell. The buildings can be insulated, heated or air-conditioned as required. Rubb structures are uniquely suited for use as dehumidified facilities.



## Reduced time on-site

Our established supply chain streamlines coordination of delivery and installation. Pre-fabricated elements and the ability to construct our buildings in a variety of weather conditions speeds up the construction process.



## Rapid construction, installation, and relocation

Rubb buildings can be quickly erected, dismantled and relocated due to module pre-fabrication. Rubb can provide site supervisors or fully dedicated construction teams to complete any custom project. Structures are transportable by land, sea and air.



## Flexible and cost-efficient foundation systems

Rubb buildings can accommodate many foundation options such as concrete up-stand, ballast weights, and ground anchors into an existing surface. Rubb co-ordination with the groundwork contractor is key for the client to reach the most cost-effective solution.



## Customisable features

Buildings can accommodate all types of door, ventilation and other systems. They can safely support high loads imposed by overhead cranes, ceiling-mounted HVAC and fire-suppression systems, fall-protection equipment and other superimposed loads.



## Comprehensive long-term service

Rubb personnel are on hand to provide help and support, from initial contact and quotation, to installation and beyond. Rubb's commitment to customer service continues after project completion and forms the basis for long-term customer satisfaction.



# Gateshead Council

Gateshead, UK



Type  
BVE



Span  
30m



Long  
30m



Eaves  
5m



Apex  
13m



Door  
Open

In 2011 Rubb rose to the challenge to design, manufacture and install a custom salt storage barn to support Gateshead Council's expanding winter road maintenance plans.

Rubb provided a custom designed salt barn that sits on top of a 3m high concrete supporting wall. The salt storage structure measures 30m wide x 30m long with a tapered leg height of 5m. The overall height of the storage facility is 13m.

The building benefits from an open front gable end to maximise storage space and accessibility. To accommodate this large opening, the rear gable of the building was reinforced with anti-flap pvc pockets to prevent fabric damage due to strong winds.



**It's great; it's done its job. It has stood the test of time for 11 years in this corrosive environment with minimal repairs. It has performed well, despite facing the prevailing wind.**

Street Scene Director  
**Philip Hindmarsh**





# City of Saco

Maine, USA



Type  
NV



Span  
18.2m



Long  
34.4m



Eaves  
5m



Door  
Open

When the City of Saco, Maine purchased their Rubb salt shed in 2014, they didn't know that it would be used to build a new Public Works complex six years later and three miles away!

The original building purchased by the town in 2014 was an NV range structure measuring 18.2m wide by 34.4m long with a 5m sidewall height. Each gable end had a 6m by 6m framed opening and the building's foundation utilised the innovative Rubb BulkBlock™ design.







Ease of relocatability with minimal loss of materials is just one of the many advantages of a Rubb frame supported fabric structure. In this case, the building was taken down and relocated to the owner's new site in a matter of four weeks. The cost of the entire move was roughly 30% of the original purchase price (delivered and installed) and this structure will now continue to provide many years of maintenance free service for the City of Saco.

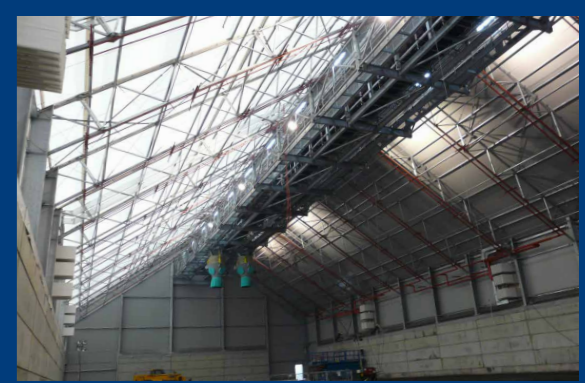




# E.ON Energy

Ironbridge Power Station, UK

	<b>Type</b> BVC		<b>Span</b> 31.5m
	<b>Long</b> 137m		<b>Eaves</b> 8.8m
	<b>Apex</b> 21m		<b>Door</b> RSD



Rubb worked with AJS Contracts Ltd to provide its tallest structure to date to energy giant E.ON UK.

The 31.5m span x 137.5m long building at Ironbridge Power Station, Shropshire, UK, has an apex height of 21m. The roof provides rigidity with minimal deflection, providing stability and support for a 200 ton roof-mounted conveyor system used for the dispersal of biomass fuel products. The wood pellet processing facility features a roof pitch of 35° which was designed around the angle of repose of the biomass materials. Ironbridge was previously a coal fired power station that has been converted to run on biomass fuel. It is the first of its kind in the UK.



**It was clear from the outset that Rubb were determined to deliver what was their most challenging build ever on a project that had an almost impossible timescale. Rubb Buildings have developed a biomass facility that can be rolled out globally across the renewable industry sector and AJS Contracts would be more than happy to recommend their services to any prospective client.**

Renewable Energy Manager,  
AJS Contracts, **Martin Wylie**



# Rocky Coast

Maine, USA



Type  
NV



Span  
18.2m



Long  
28.3m



Eaves  
4.8m



Door  
RSD

In the beautiful, rocky coast village of Stonington, Maine, Rubb provided a municipal salt shed to service the roads of Deer Isle, Maine.

Completed in the fall of 2019, the building measures 18.2m x 28.3m x 4.8m and is equipped with a 6m x 6m electric powered Cookson roller shutter door.

The building is mounted upon Rubb's patented BulkBlock foundation system. Essentially, the BulkBlock™ system provides the structure with a code compliant foundation system, while also serving as a retaining wall for road materials.

The Rubb NV structure is also hot dip galvanized to the ASTM A-123 standard which provides the best corrosion protection in the marketplace, far superior to wooden and metal bulk storage facilities. It is designed to withstand difficult environmental and corrosive conditions and have much lower maintenance costs than traditional storage facilities. Rubb salt and sand storage barns can also be designed to accommodate conveyors and other processing methods.





# City of Sanford

Maine, USA



Type  
BVE



Span  
21.3m



Long  
24.4m



Eaves  
5m



Door  
Open

Completed in 2010 Rubb provided a salt storage barn allowing the City of Sanford, Maine to purchase and store road salt during the offseason thereby saving considerable tax dollars.

The City of Sanford Municipal Government selected a 21.3m x 24.4m BVE Rubb structure with 5m sidewalls.

The storage structure was designed to meet 70 psf ground snow load and 90 mph wind load with a 3 psf collateral. The City of Sanford, Maine favored the Rubb design because the white roof provides a naturally lit interior and the structure enables flexibility for future growth.

This structure will provide a salt storage capacity of 2,686 tons. The leg trusses and gable columns are powder coated to provide another layer of protection from the highly caustic nature of salt.







## Rubb's insulated cladding system

Rubb's patented Thermohall® features a flexible insulated fabric system which offers major advantages over other insulating systems:

- Non-combustible glass wool is encapsulated in air and water tight pockets
- Insulation thickness from 50mm to 150mm
- No air gaps in the cladding, which reduces heat loss and helps eliminate condensation
- Buildings are fully relocatable

Development of Thermohall® started several years ago, with the goal of a new and eco-friendly insulation system. Thermohall® is now fully developed and patented. Thermohall® offers great energy savings and is environmentally friendly—both in fabrication and operation.

- Rubb uses a heavy-duty PVC fabric with a long, useful life and high density, non-combustible glass wool insulation
- All the materials are recyclable. Steel can be recycled through various means and PVC can be recycled through initiatives which are part our operational supply chain and environmental partnerships. The insulation material that Rubb uses is processed from recycled glass
- Rubb Thermohall® structures combine the best properties of both conventional buildings and fabric buildings, high thermal insulation and full relocatability. All Thermohall® buildings can be delivered to suit our customers' insulation requirements



## Thermohall® technical specification

Thickness	U Value (SI) W/m2K	R Value (US) ft-F-hr/BTU
50mm (2in)	0.67 W/m2K	R11
100mm (4in)	0.36 W/m2K	R19
150mm (6in)	0.25 W/m2K	R27

### Outer layer

Flame retardant heavy-duty fabric

### Inner layer

Self-cleaning PVC fabric

### Core

High-density glass wool insulation





# Rubb structures

Rubb has the capability and experience to design, manufacture, deliver and install custom structures.

With Rubb, you can be sure everything is under control from concept to completion—including cost, quality, and delivery.

While we generally have the right standard structure available to meet project needs, Rubb can also design custom solutions to meet special requirements. We have the in-house resources to provide a cost-effective solution customised to our clients' needs.



## Design

Using proven engineering software, we can tailor the project to the specific requirements of the site, type of cargo and logistical needs.



## Production

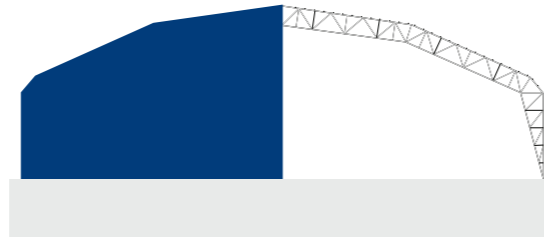
Our steel and membrane components are fabricated with proper equipment and quality control.



## Installation

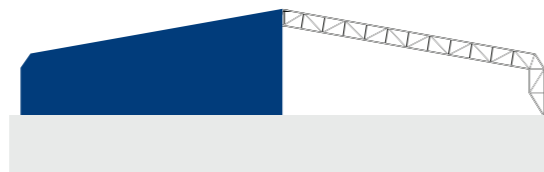
Pre-engineered and pre-fabricated to make on-site installation by a Rubb crew—or your crew—go smoothly and efficiently.

Rubb can provide custom designed facilities in a variety of configurations and sizes to suit your specific requirements.



## BVE

BVE structures feature lattice frame sidewalls and can be designed with single or multiple lattice roof pitches. 20m to 40m span widths, by any length.

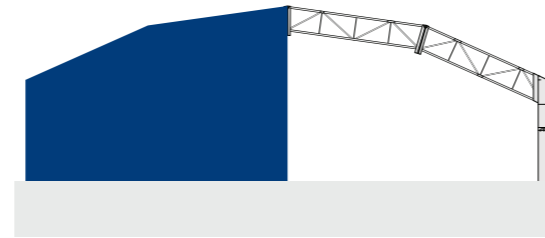


## BVL

The BVL has vertical lattice frame sidewalls and single or multiple lattice roof pitches per span. Large spans start from 40m to 100m in width, by any length.

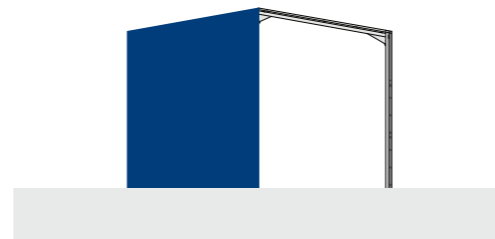
The structure types below are typically used for Rubb's salt and sand facility projects.

To learn which kind best suits your project, contact the Rubb team today.



## BVC

The BVC is designed with a vertical column leg and a lattice frame roof. This structure type offers a large clear internal area. 40m to 100m width spans are available.



## BVR

The versatile BVR structure type features rectangular leg and roof box sections. The leg height can be extended for additional interior clearance.

# Door options

Rubb offers a variety of different door solutions.

They can be selected and designed to suit many size and opening requirements. This flexibility ensures that our clients get the best option for their selected Rubb building type, depending on their operational needs.

Rubb can supply a wide range of access and industrial roller shutter doors.



## Access door

These types of doors are suitable for public and non-public areas. EN 1125 and EN 179 standards apply to push bars and touch bars respectively. All doors and emergency exit doors supplied by Rubb adhere to European product standards. To meet customer requirements, all doors come with CE marking and are ISO 9001 approved.



## Roller shutter doors

Commercial off-the-shelf doors, measure up to 10m x 10m, but Rubb can also offer custom door sizes. All doors incorporate a motor driven system, with built in safety mechanisms. Doors can be electrically operated and can be combined with safety devices and traffic lights. All doors can be customised to suit business operations.





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