


EBOOK

Iconic glass buildings in Stockholm





Architecture in Sweden showcases a range of innovative contemporary projects, using diverse materials and unconventional forms of construction.

Notably the use of glass has given a certain *je ne sais quoi* quality to a myriad of structures, helping to create their own particularity and personality.

Glass can be used for aesthetic purposes, but also for thermal insulation, solar protection and noise control to create comfort using artistically inspired concepts. Here is a short list of **some of Sweden's architectural masterpieces** using glass to combine aesthetic, comfort, energy efficiency and performance.

Norra Tornen



Fact sheet

- CITY Stockholm (Sweden)
- ARCHITECT OMA
- GLASS PROCESSOR Klaasimeister
- CLADDER Westins Fönsterteknik AB
- GLASS USED
Guardian ClimaGuard® Premium2
Guardian SunGuard® SN 51/28
Guardian SunGuard® SN 70/37



Modern housing typologies: the next generation

Norra Tornen is a pair of modern high-rise apartment buildings located in the Vasastaden district, Stockholm.

The highest residential building in Stockholm, the eastern tower is 125 meters tall (410 ft), with 36 floors. Opened in 2018, the tower comprises 182 residential units, as well as a cinema, a dinner room for events, guest apartments, gym, sauna and shopping commerce on the ground floor. The western tower opened in 2020 and is 110 meters (360 ft), with 33 floors. The complex contains 300 residential units.

A unique architectural approach

Norra Tornen's design is based around a **modular system** of precast exposed concrete elements. The composition is made up of alternating bay windows and recessed terraces, and the facade is ribbed concrete brushed with aggregate pebbles.

With a wall-to-floor ratio coming close to 1:1, the design would have probably discouraged most developers as a tower rarely goes above a ratio of 0:5. But with Sweden's **scarce daylight** for half of the year, extra square meters of windows and multiple orientations for each apartment becomes a **precious asset**.



Each facade uses a different type of glass

The most expensive solution is not necessarily the best, it is better to decide upon what suits the design's needs, depending on the exposition of the facade to maintain an overall harmonious aesthetic. With this in mind, for the North Side of the tower, **Guardian ClimaGuard® Premium2** coated glass was chosen for the windows, which offers an exceptional level of light transmission, allowing a high amount of natural daylight into residential spaces, and helping to reduce the need for artificial lighting. It provides great thermal insulation, which is important for that region and for a North exposed facade.

For the East and West sides, **Guardian SunGuard® SN 70/37** was selected to make better use of natural lighting against artificial lighting. It also helped to prevent the overheating of the rooms, offering very good solar control. For the South side, **Guardian SunGuard® SN 51/28** was chosen. This highly selective glass has a good ratio of light transmission/optimal solar factor which allows a maximum of light to pass for a very low solar factor. In a standard insulating glass unit, the glass blocks 72% of the solar energy for a light transmission of 51%, which helps minimizing the need for artificial light and for air conditioning. As the building is for residential use, the user's comfort is a priority.

PostNord Headquarters



Fact sheet

- CITY Solna/Stockholm
- ARCHITECT BSK Arkitekter
- GLASS USED
Guardian SunGuard® Solar Neutral 67



A giant made of wood & glass

PostNord Headquarters is a 12 storey glass building covering an area of nearly 60,000 square meters. Called the 'Think Tank', it is home to about 1,600 employees with a facade made up of several layers to **minimise energy consumption**.

PostNord's head office or 'Arken', has received the prestigious **certification BREEAM Excellent** in-use with the office floor consisting of two parallel ships with an intermediate atrium. This includes stairs and beams for the office floor communication, as well as cocoons for meeting rooms.

Playing with transparency

When the visual presence of materials decreases, a **maximal transparency** creates great beauty, as is the case of the building's transparent floor. It is a continuation of the void, enabling depth of vision, and changes as the observer moves. Transparency makes the user **perceive different spaces simultaneously**, creating varied perceptions and sensations inside or outside of a space.

Using **Guardian SunGuard® Solar Neutral 67** in the facade allows a consistent amount of daylight to brighten spaces, and also allows the **architectural splendour** of the internal structures to shine through.



Nature meets nurture

In Sweden, **nature is always close-by**. The building is designed along the slope of a hill between Tomtebodavägen post terminal and the former police academy. The shape of the building was designed to **fit the terrain**, with a unifying, transparent ground floor which follows the topography of the hill.

The building is surrounded by greenery, and the wooden and glass materials of its facade **echo its environment**. The interaction between the building and the surrounding nature has always been dominant, with **completely glazed facades** so observers are able to **enjoy the view** and feel immersed in the woods.

This way, people can experience the environment and **connect with the outside**, helping to **increase the overall well-being** in the workplace.

Victoria Tower



Fact sheet

- CITY Stockholm
- ARCHITECT Wingårdh Arkitektkontor AB
- GLASS PROCESSOR AS Klaasimeister
- CLADDER Skandinaviska Glassystem AB
- GLASS USED

Guardian SunGuard® Solar Silver Grey 32

Guardian SunGuard® Solar Silver 20

Guardian SunGuard® Solar Royal Blue 20

Guardian SunGuard® Solar Silver 08

Guardian SunGuard® HP Amber 41/29



A landmark tower

The Victoria Tower is a skyscraper hotel located in the Kista district of Stockholm. At 118 meters high and 34 floors, it's **one of the tallest towers in Scandinavia** after the Turning Torso in Malmö, as well as the tallest hotel in Northern Europe, dethroning the Plaza Hotel in Oslo. It houses a 300 room hotel, conference rooms, restaurant and a panoramic bar.

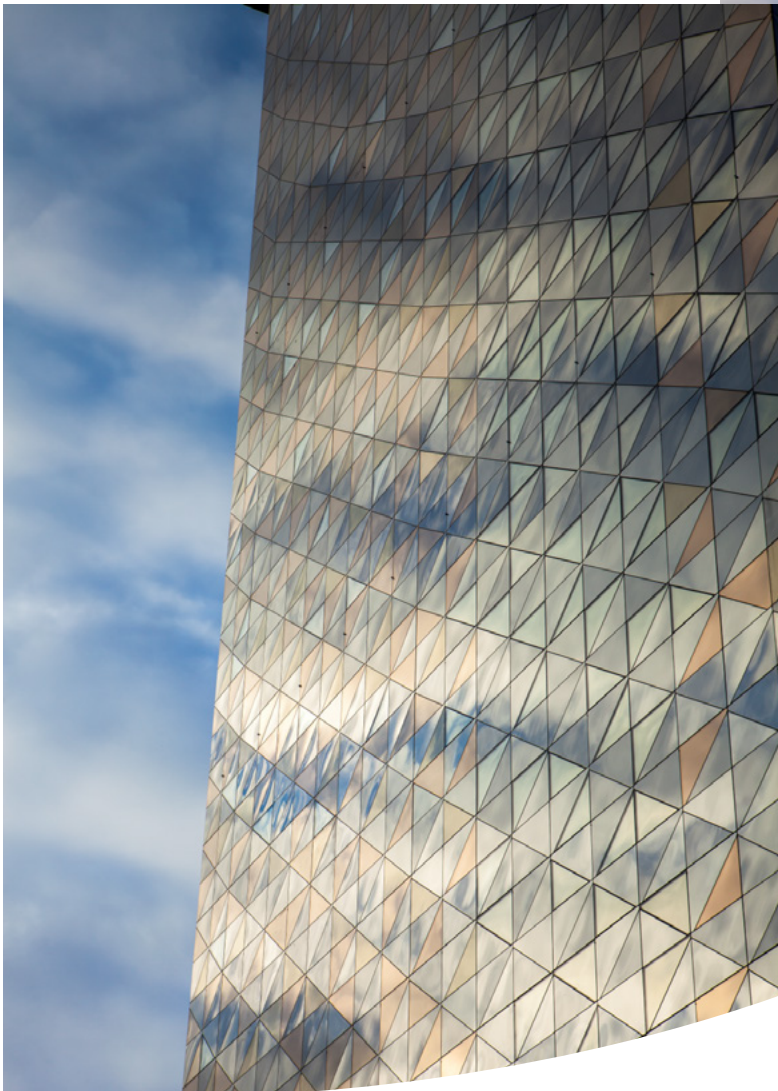
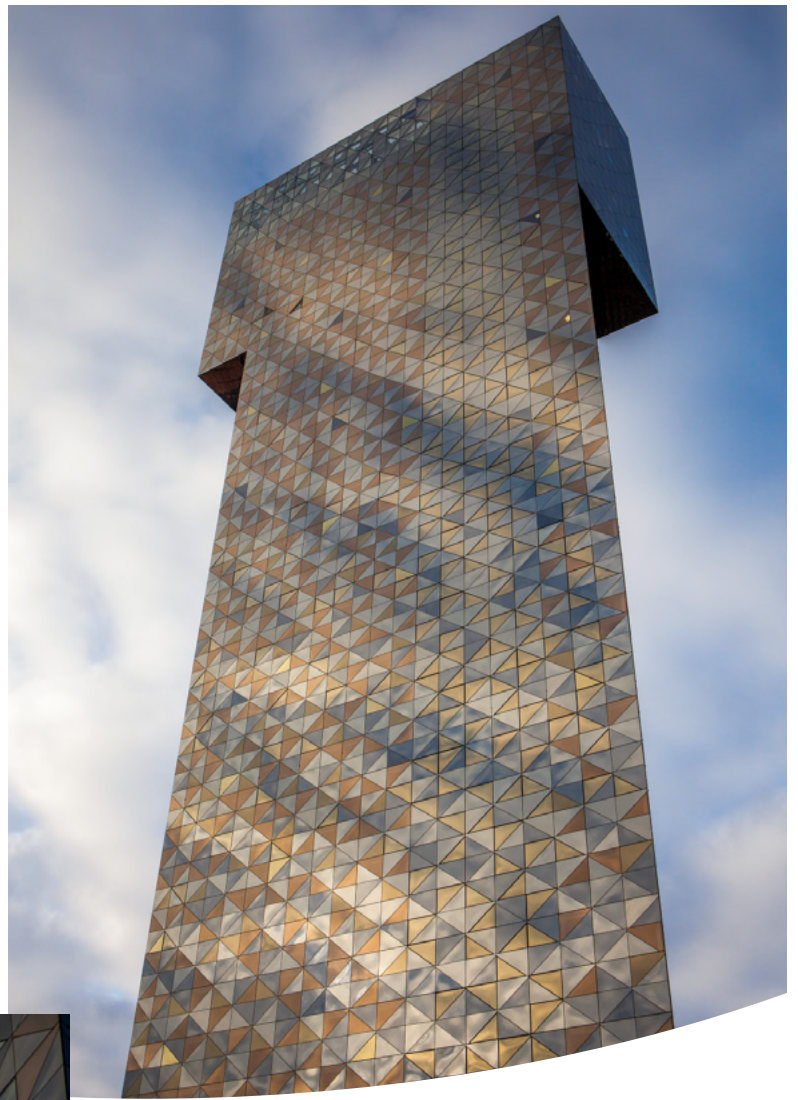
The ten highest floors consist of offices, with an area of 5,000 m². The architect responsible for the project is Gert Wingårdh, in collaboration with Karolina Keyzer who since August 2010 is the title architect of the city of Stockholm.

A geometric prism of glass

The building is wrapped entirely in a **cloak of glass**, standing like a lighthouse along the road between Stockholm and the city's airport.

The building shape – a “T” – allows the upper floors to cantilever over the main structure of the building, **accentuating its silhouette**.

The facade is made up of metal-coloured triangular windows of **eight different types of glass** which give the facade its **unique character**.



Colour that changes, colour that shines!

An irregular arrangement of coloured triangular panes makes the building **shine and sparkle in the daylight**.

Because of the reflective and colourful glazing, the building's appearance changes depending on daylight or the weather. The appearance of the tower varies and offers visitors and passers-by a **differentiated visual experience**.

Although it may be imposing, the glazing and perception of movement and change ensures the tower is **not static in its environment**.



The artful efficiency of glass

From prism-like structures, or wooden and glass buildings etched into a hillside, and even impressively looming residential towers, Sweden has a number of buildings that have used the beauty and efficiency of glass to create iconic landmarks. Each project chose glass to integrate nature and take advantage of transparency that is beneficial both to the architecture and the comfort of those within the building.

Do you need help selecting the right glass for your project based on its specific requirements?

See what's possible by contacting our glass experts.

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