

Ulrike Brandi, Christoph Geissmar-Brandi

Light for Cities

Lighting Design for Urban Spaces. A Handbook

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BIRKHÄUSER


Birkhäuser

of the light sources with the regular spacing of poles make it easy for pedestrians to judge distances.

Hakenstraße receives overhead wiring at a height of eight metres because this best suits the function of the street. Light poles along one side of the street serve the mixed areas, like Langenstraße, Sandstraße and Museumstraße. In addition, important and architecturally interesting buildings are flood lit. The street space widens towards the top and presents new focal points that catch the eye of passers-by.

The areas of Marktstraße and Wachtstraße receive overhead wiring at a height of eight metres as they are mainly used for vehicular traffic. The light points trace the alignment of the road and facilitate orientation. Here, too, light picks out several important and architecturally relevant buildings and creates an interesting urban environment.

Squares

There are two types of square in Bremen's city centre. Firstly, the large squares with vehicular traffic, and secondly, smaller squares for pedestrian use only.

Tall masts with mounting heights of 9.5 metres provide direct light for the large squares, like Domhof, Domsheide and Am Dom. Spots fixed to these masts cast light onto surrounding facades and objects in the square. Unlike the low lighting points used in the streets, the illumination from a height lends these squares a generous character; it makes the space appear extensive.

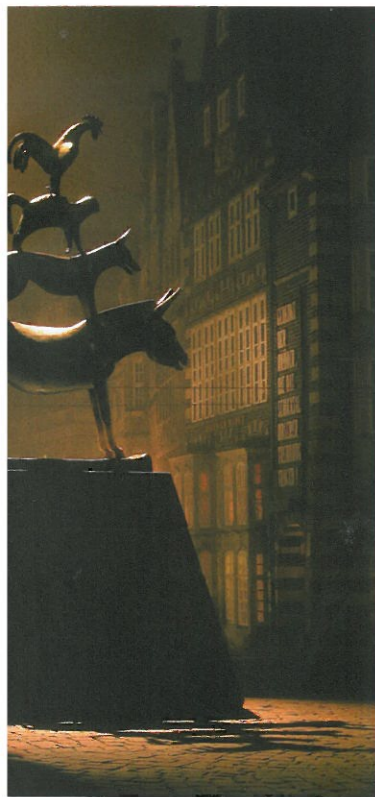
Spots mounted at the top of facades provide light on the small-scale squares around the Town Hall and Liebfrauenkirche. The light sources are not in the pedestrians' field of vision, but cones of light distribute a uniform brightness over the area. To create a transition between bright street lighting on Obernstraße and the small squares and narrow streets, illuminance levels are staggered in different zones. This permits the wash of light and light emitted by luminaires mounted close to the Town Hall and Liebfrauenkirche elevations to occupy the foreground, as intended. Selective spots provide soft light for Markus Fountain and the sculpture of the Town Band of Bremen.

Facades

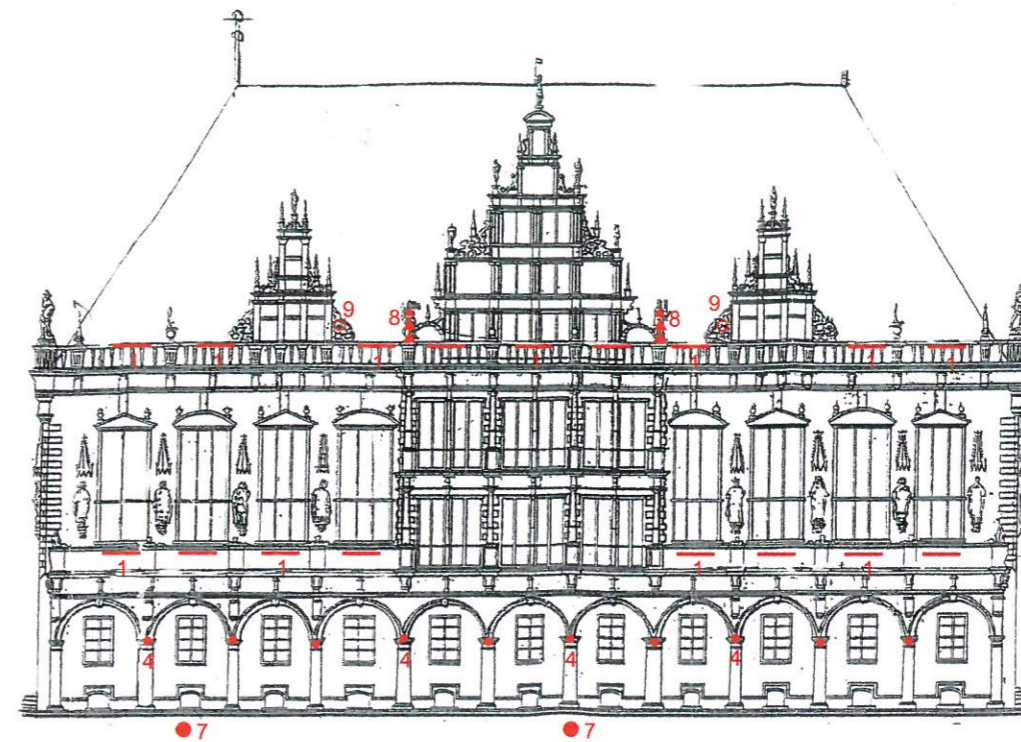
The vertical planes of facades make a significant contribution to the sense of space in squares and streets. Two complementing light principles are applied: the broad, calm light from a distant light pole or from opposite houses and the small-scale accentuated illumination of cornices and projections on the facade itself. In combination both these principles make the facade appear generous and at the same time three-dimensional and structured.

Town Hall

The Town Hall, located in the city centre, displays its facade in all directions. The elevation facing the market, seen from the middle-distance, receives a wash of light: light mounted close to the facade directed onto ornaments and figures, light on the gables and on the arcades. The roof is of the copper-green variety that looks bright. Illuminated windows lend the Town Hall an animated appearance. On the elevation facing Obernstraße, identical principles apply, in particular the light on the gable is meant to be seen from a distance. The high

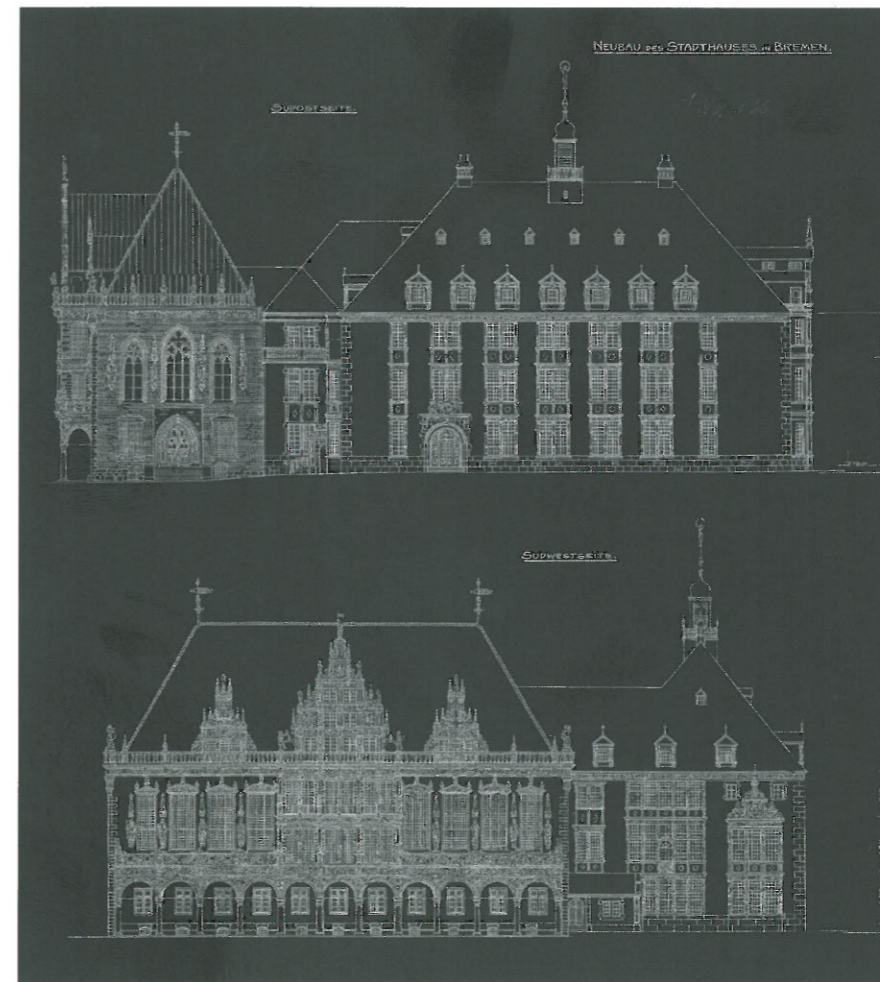


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- fluorescent luminaire
- uplighter
- spotlight
- ▲ spotlight DWP 604
- spotlight SNF 100

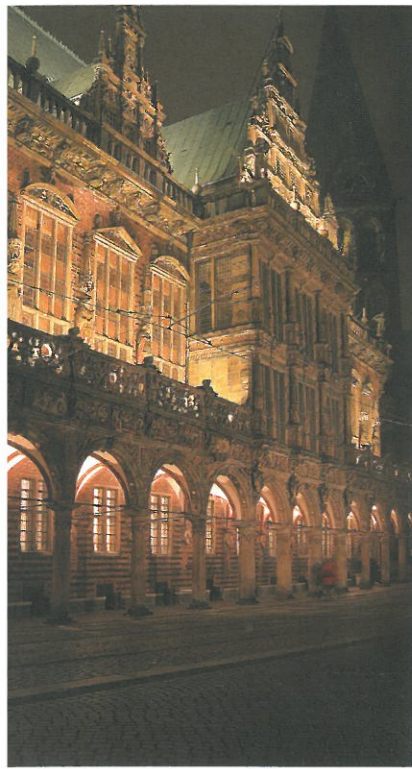
Elevation of Bremen Town Hall facing the market with luminaires and luminaire positions



Other facades of Bremen's Town Hall



Town Hall with and without backlit windows (the latter was the intention of the masterplan)



Town Hall: We found
wires on the roof,
the arcades. Not
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jare.

luminosity is the response to the relatively bright shopping street. Towards Schoppensteel, the light is adjusted to suit the small scale of the space. It is more reserved and transforms the formerly dark area into a pleasant environment. Directed light places special emphasis on the small stairwell-tower and the Town Band of Bremen; they are the dominant features on this side of the Town Hall. The bright windows and the illuminated roof are intended to be viewed from distant Domhof. The same principles as for the other building elevations apply to the elevation facing Domhof and the back of the Town Hall. Bright windows and light on several figures (Windsbraut, for example) structure the facade and display it. Here also, a wash of light and light on the gables bring out the distant effect.

The Glocke

The austere gable elevation with its doorway arches is the central feature of the lighting scheme. A soft wash complements the lights mounted close to the facade, aligned along the vertical direction of the gable. Smaller spots light the entrance, the windows shine from within. The roofs receive a wash of light emitted from the cornices and the back of the stairwell gables.

Liebfrauenkirche

This church is different from the other large buildings because it has fewer windows (especially on the entrance elevation) and it is constructed of large boulders, making it appear more solid. Spots mounted on a mast erected between the trees light the walls. The existing overhead wires were removed. The rose window shines from the inside, just like the lateral windows. The tiled roof is not lit, it only reflects the stray light of the urban surroundings. The green roof of the tower appears like a sign of the church. The gables and recessed windows receive light from fluorescent luminaires that give depth to the facade.

Cathedral

The Cathedral with its many copper roofs and two widely visible towers dominates the city centre from many viewpoints. The roofs are lit. The lights on the inside of the Cathedral windows and the facade illumination present a distinct character. The entrance portal receives direct light to bring out the shine of the gilding above the doors. Spots mounted on poles in the courtyard, Domhof, illuminate the historical building and its side entrance. The wash of light on the front of the Cathedral makes it widely visible and emphasises the power of the church.

Large-format projections on facades: building facades may serve as screens for projections of all kinds of motifs from large-format projectors (Pani, for example). Buildings are thus visually transformed into entirely different structures. Projectors can be temporarily fixed to opposite buildings, or to poles.

Coloured light on facades: coloured light on facades completely changes their appearance and effect. Coloured architectural spotlights may be temporarily fixed to opposite buildings, to poles or mounted on the building to be lit. An additional option would be to adapt existing lighting systems (for example, floodlights) by inserting colour filters.

Laser light show

Laser light shows are events for special occasions. With the use of laser lights squares and streets may be transformed into theatrical settings. Moving lights: "intelligent" spotlights, so-called "moving lights", open many design possibilities. Spotlights may project moving coloured beams or gobos onto facades and the ground. These systems can be installed on buildings and on masts.



- 3 ○ backlit windows
- 4 ● entrance lighting (existing)
- 5 ○ accent on lettering with spotlight
- 6 ▼ accentuation of relief with spotlight
- 7 ■ gobo beam on mast (tracing gable outline)

Luminaire positions for another important facade in the centre of Bremen: The Glocke