

## Solutions at a Glance: **LIGHTING BRINGS LIFE BACK TO NEIGHBORHOODS**

*By Denise Fong, Candela Architectural Lighting Consultants*



Good lighting in Malmö, Sweden makes the streets inviting day or night

To appreciate the importance of light, particularly in an outdoor space, it's important to understand why people use the space.

Jan Gehl, Professor of Urban Design at the School of Architecture in Copenhagen and Chairman of the Urban Design Center, spent time with our sustainable tour group this past October discussing research on what makes urban centers vibrant places.

According to Professor Gehl, there are three historical uses for cities. Cities are places for people to meet, they provide access to the market to sell goods and services, and are places to make connections or gain access. He also sorted the activities of public places into three categories: meeting

places, recreation areas, and spaces for watching people.

Cities became out of balance when cars were introduced. The cars pushed out the people and pedestrian spaces, diminishing the opportunity to make connections.

As cities bring back to life their "people places" by recreating plazas or squares, pedestrian streets, and neighborhood cafes, there are daytime and nighttime components to them. What makes an area that is vibrant during the day also vibrant at night?

One example of how light can revitalize a community is the district of Holmbladsgade in Copenhagen. Holmbladsgade was once a rundown,

post-war neighborhood. During a recent redevelopment, an overall project goal was to introduce elements that made evening activity feel safer and more desirable.

This district has high density housing units that are uniformly organized off of a main thoroughfare, with wider streets than the historic areas of Copenhagen. Holmbladsgade has retail activity at the street level with some apartments above. Most of the residential units are on the side streets. Prior to the redevelopment, it was considered a less than desirable place to live.

With input from residents, most of the redevelopment funding was put into lighting improvements and public art, with water as a central theme. Although this neighborhood does not have water as a local element, the city is surrounded by water and there was a desire to figuratively bring water into the neighborhood.

General lighting along the main street was improved by replacing high-pressure sodium fixtures with metal halide fixtures. High-pressure sodium yields a yellowish light that makes all colors look dull and brownish, while metal halide is a white light source with improved color rendering characteristics.

As is common in many cities in Europe, the street lighting is suspended between buildings on a

centenary system rather than the 30 ft high poles that you typically find in U.S. cities. Eliminating poles along the street reduces the visual clutter and improves vistas.

On the main street, lighting fixtures allow for a small amount of light to come out of the sides of the fixtures, casting a soft glow. This suggests a higher level of activity and prevents there from being a sharp cut-off of light on the building facades. On the side streets, which intersect Holmbladsgade at 90 degrees, a similar fixture and lamp are used but the fixture is a full cut-off fixture. This may have been done because the streets are narrower and quieter, with more residences facing onto them.



Neighborhood plaza in Holmbladsgade

Some of the side streets have plazas with lighting unique to that area, creating places for impromptu neighborhood gatherings. On a block that has more historic buildings, all traditional forms of light were replaced with uplights that are installed somewhat randomly near building facades to highlight the buildings. This gives the impression of a much quieter street, with many nooks and crannies to explore.

Street names are identified with placards on the buildings at each corner. These placards are illuminated with a wall-mounted fixture that has a downlight component to illuminate the sign, and an uplight component that is

contained by the curved upper reflector of the fixture. They are effective as devices to illuminate the signs as well as markers to help define the neighborhood.



Glass art tiles are illuminated with blue LEDs to evoke a water theme

The main street features two art light pieces that evoke the water theme. One is a grouping of glass tiles with wavy lines of bronze across the top that are clustered at several corners. The glass is illuminated from below with blue LEDs. Each glass tile replaces one cobblestone.

The second piece is a tall, mostly translucent icon with horizontal metal details representing the intersecting side streets of the neighborhood. These are "to scale" and the wavy vertical edge represents the shoreline. They produce a warm white light, and make interesting and distinct markers at intersections. In the summer they change to a cooler white light. Every half hour they turn blue, which is done as a nod to the action of waves lapping onto the shore. They have a full range RGB color-changing system so they can be programmed for any number of unique changes.

Some people would argue that this is not sustainable design because it doesn't use full-cut off fixtures and some of the light goes up into the sky. However, I would argue that this is entirely appropriate for an existing urban area. The change to metal halide makes colors visible and casts a friendly light. People are easy to see and colors are visually accurate. The

street lighting fixture provides a comfortable balance between the necessary working light and a soft glow (not to be confused with glare) emanating from the fixtures to signal life, vitality and spirit for the neighborhood. The whimsy of the blue glass tiles and the color-changing light of the iconic posts creates surprise, which leads to joy, which makes people want to inhabit the streets. Isn't giving new life to an old rundown neighborhood what sustainability is really all about?

### The Urban Sustainability Study Groups to Sweden and Denmark

*In 2004, International Sustainable Solutions ([www.i-sustain.com/](http://www.i-sustain.com/)) brought several groups of architects, engineers, developers and others from the Pacific Northwest to Scandinavia to look at advanced urban sustainability projects. During these trips they visited Copenhagen, Denmark and Malmö, Sweden, taking full advantage of opportunities to walk the inviting and well lit urban streetscapes.*

*International Sustainable Solutions encourages the implementation of sustainability practices and products by facilitating the sharing of knowledge and the creation of market opportunities.*

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