

A nighttime photograph of a historic stone building, likely a town hall or clock tower, illuminated with warm, golden light. The building features a prominent clock tower with two clock faces. In the foreground, a large, circular fountain with several water jets is lit up with vibrant purple and blue lights. The sky is a deep blue, and a few people are visible walking around the fountain area. The overall scene is a blend of historical architecture and modern lighting technology.

PHILIPS

Case study

Public

Parks and Plazas

Dynamic lighting helps rejuvenate Sunderland city centre

Location: Keel Square, Sunderland
Philips Lighting: Philips Luma, bespoke columns and a dynamic lighting system.



“All elements were to work together, from architectural lighting to feature lighting such as gobo projections and water feature lighting, to create different effects through the seasons and for special events. However, the principal sculptural pieces were to be the bespoke lighting columns, complemented by various other focal and sculptural pieces.”

“Having engaged with a number of potential suppliers it was clear from the start that Philips bought into what we wanted to do,” he added.

During subsequent discussions and design workshops it was determined that five lighting columns would be needed to provide the required light levels on a day-to-day basis, as well as contributing to special occasions. It was therefore important they should not clutter the space; so they needed to be slender, with timber being the preferred aesthetic to help soften the space.



Fast Facts

Customer
Sunderland Council

Location
Keel Square, Sunderland

Philips Solution
Bespoke columns, Philips Luma, Philips UrbanScene, Philips UrbanScene Gobo, Philips Graze Powercore, Philips ColorReach, and Philips DecoScene LED

Project Partners
Sunderland Council, Balfour Beatty Living Places, LITE and Chris Bramall



The creation of a new public space in Sunderland, part of a project to transform the city’s centre, features bespoke lighting columns and a dynamic lighting system from Philips Lighting.

Keel Square is a major element in a series of interlinking schemes that is designed to rejuvenate Sunderland city centre, making extensive use of illumination to animate spaces and enhance the night-time atmosphere. The Keel Square project forms part of a wider-ranging re-development of the city centre that is expected to generate private sector investment of around £200m and create approximately 4,000 jobs.

The design brief from Sunderland’s Landscape Architects was to combine functionality with creative thinking within a ship building theme that reflects a key element of the city’s heritage.

Senior Landscape Architect James Gordon recalled: “In consultation with our PFI lighting partner, Aurora/Balfour Beatty Living Spaces, we developed a strong vision to provide striking statements whilst providing flexibility to cater for different events, themes or moods.”

The project team also identified that the timber bases of the columns would be vulnerable to the carving of names and other forms of vandalism. Taking inspiration from the coiled rope that surrounded the masts of wooden ships, the solution was to create metal sculptural elements at the base. Fabricator Chris Bramall produced bronze bases mimicking the riveted sheet metal of ships for four of the columns, and a coiled rope design for the tallest (14m) column.

As the design proceeded there were a number of changes. “We kept throwing new challenges at Philips, such as a requirement for CCTV to be mounted on the columns. This had an impact on

the structure as any movement of the column would impair the clarity of the CCTV pictures and for a while it seemed that timber would not be feasible. Then Philips calculated that we could use a steel column clad in timber to achieve the desired aesthetic effect.” James Gordon continued.

To achieve the required lighting levels within the square, the main feature columns have been fitted with Philips UrbanScene luminaires. A key challenge here was to achieve uniform light distribution across the square from only five mounting points and this required precise positioning and orientation of the luminaires.



The feature columns are also fitted with a number of UrbanScene gobo projectors using a variety of templates to project images onto the surrounding buildings and paving. Provision has been made for fitting temporary bars to the columns to support additional lighting if needed for special occasions.

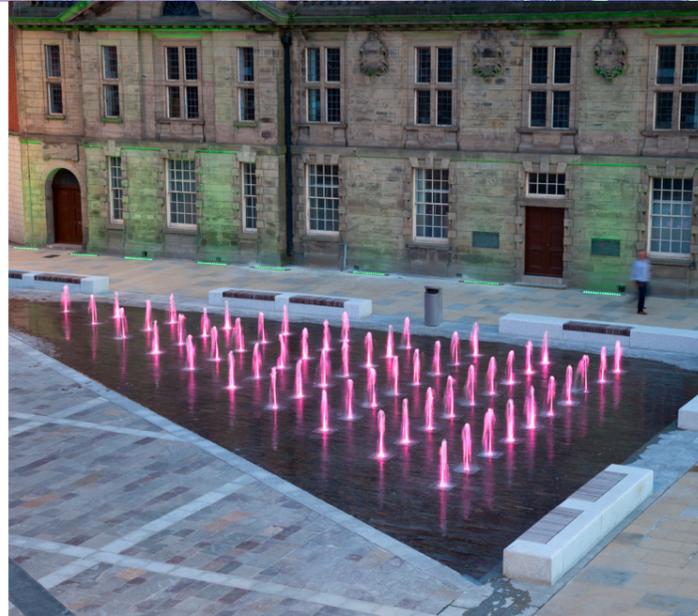
There was also a desire to be able to create a 25m by 18m canopy of light, containing around 25,000 LED lights as the main element of the Christmas lighting within the square. This provided another design challenge, which was solved by providing an additional column, in keeping with the feature columns, which can be erected when needed.

The square is enclosed to the west by a Grade II listed Magistrates' Court and the project sought to anchor this structure into the new public space, emphasising the building's details and celebrating its Edwardian heritage.



The building's grand clock tower is highlighted from a floodlight on an adjacent column, with additional floodlighting of its north and south elevations from further floodlights on a hidden platform. The architectural details of the building's facades are picked out by a combination of Philips Graze Powercore, ColorReach and DecoScene RGB LED luminaires within ground mounted enclosures, as column attachments, and roof mounted units to ensure full coverage of the building and adjacent trees.

The square also features a dancing water table, again illuminated by colour-changing LED fittings.



The majority of the colour-changing lighting, commissioned by LITE ltd, is synchronised from a central point through a Pharos DMX control system using a DMX-DALI interface to the luminaires. This has been used to create sequenced programs that provide flexible colour schemes and can be changed to suit requirements. The Pharos controller is located in a new pump house that was constructed for the water fountains, so that when the lighting is being changed manually the effects are immediately visible from the pump house.

On the north side of the square a new dual carriageway has been created, running parallel with the river. Both road and pavement lighting are provided by Philips Luma LED lanterns mounted on 59 bespoke single and twin arm conical tapered columns. These incorporate a removable bracket arm fixing at key locations to allow for flexible advertising and wayfinding banners. Some of the columns also carry CCTV cameras.

Use of LED lanterns on this new road has reduced power consumption by 35% compared to traditional street lighting. Further energy savings are achieved through a standard dimming regime, reducing consumption during off-peak and night-time hours.

The versatility of the lighting scheme in and around the square has enabled Sunderland Council to create a dynamic new public space that will engage the local population and bring a new lease of life to the city centre. The project also illustrates Philips' ability to deliver a comprehensive design and manufacture service, creating and working with bespoke designs in a range of materials and finishes.

If you would like to see more lighting projects or have an enquiry, please visit us at www.philips.co.uk/lighting or email: lighting.uk@philips.com



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