

GATESHEAD LIBRARY

Case Study



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Thorn create a brighter, more engaging atmosphere for library users

Thorn Lighting has played a key role in improving the lighting levels and reducing the running costs at Gateshead Central Library in Tyne & Wear with a selection of LED luminaires from the company's [Chalice](#), [Omega LED](#) and [IQ Wave](#) ranges. Gateshead Central Library was looking to refurbish the main entrance reception with the aim of improving the shop aspect and approached Gateshead Council to see if they could help out.

The 2,894m² Gateshead Central Library underwent a £2.6 million refurbishment in 2011 with Lottery Funding to add a children's library extension, an art gallery extension, a new main entrance, renovation of the original main entrance, a remodelling of the main lending library complete with a shop plus the refurbishment of all other library areas. During this renovation, the lighting was replaced but it was felt that the latest LED luminaires would not only

provide savings in terms of energy and expenditure but also create a brighter, more engaging atmosphere for users.

A lighting design very specific to the proposed shop layout was required so as to maximise the illumination of the displays. Derek Luke, Senior Mechanical Engineer with Gateshead Council, commented "Gateshead Central Library were looking to refurbish the main entrance reception to improve the shop aspect and enquired whether we could help with LED lighting. Thorn fittings were duly selected to achieve the required illumination but with an economic, flexible design as known future plans for reference library and shops have a habit of changing their layout".

Chalice and Omega luminaires were chosen for the main entrance and shop, with a design very specific to the proposed shop layout so as to maximise the





illumination of the displays. It was equally important that this should be achieved with optimum energy efficiency in support of Gateshead Central Library's commitment to sustainability. Thorn's Chalice is fitted with highly efficient LED's (up to 100Lm/W) and features a 200mm cut out diameter. Chalice offers energy savings of up to 70% compared to CFL downlights and a long 50,000 hour lifetime with low maintenance requirements. Ideal for low ceiling voids, Chalice has a deep drawn aluminum body to allow a low mounting height of less than 100mm. To meet various lighting demands, Chalice is available in dimmable light outputs of 1300, 2000 and 2800 lumens, with colour temperatures of 3000K and 4000K. It has a CRI of >80, a wide beam and provides a unified glare ratio (UGR) of <22 for maximum visual comfort.

Thorn's Omega LED uses 50% less energy than a 4x18W T26 (T8) fluorescent with adjustable mounting options for through-life flexibility. Omega provides excellent uniformity and easy retrofit for traditional luminaires. Track lighting was avoided so

as to maximise the internal ceiling height which was previously reduced with dated track lighting.

For the main library, Thorn's IQ Wave, with its simple and flowing lines, has created a modern but simplistic aesthetic with a Unified Glare Rating of <19 – compliant to EN12464 which is perfect for the task. IQ Wave has an innovative MV tech optic that offers excellent uniformity, a colour temperature of 4000K and glare control plus direct/indirect light for illuminance on faces and walls to encourage a relaxed and comfortable environment. For ease of installation its new red flag design allows easy access to pull the set up from below the ceiling without the need to remove the optics from the product, allowing for a more secure fixing to the ceiling

The new lighting from Thorn has played a key role in achieving the desired lighting effect, providing the excellent colour rendering was critical to creating the right ambience while showing the merchandise to maximum effect. In addition, the overall lighting has been transformed with improved light quality, high energy savings and lower maintenance costs.



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