

**Starbucks:** What goes into lighting a global brand

Harmonious illumination for **Hazendal Wine Estate**

**'Countryside'** lighting for village-style retail centre





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"When nothing is certain, anything is possible. The complex world we are moving into requires economies of learning and robustness." A great quote from John Sanei, futures strategist, human behaviour specialist and best-selling author who was recently speaking at a virtual conference held by construction software company RIB CCS – #futurenow – which explored the urgent need for the engineering and construction industry to embrace digitalisation to remain relevant and future-proof their businesses.

He stressed the need for organisations to move beyond economies of scale and mass efficiency and recalibrate themselves for what is coming: uncertainty. "To prepare for uncertain times, we need to develop robust business models and structures that allow for experimentation and to see what grabs and what doesn't grab."

Andrew Skudder, RIB CCS CEO, says the engineering and construction sector has been operating in the same way for decades, is one of the least digitised industries in the world (21 out of 22 industries) and has not enjoyed significant productivity growth in recent years. The same could well be said of the lighting industry in South Africa. Obviously when LEDs came along and cemented their reputation as being the most cost-efficient, energy-efficient and reliable light bulb on the market, there was a seismic shift, but not much else has changed.

"I continue to be astounded by the complete lack of detailed knowledge about the technical aspects of lighting, new lighting technologies and other associated technologies and controls in South Africa." These are the words of Philip Hammond in *Lighting in Design's* sister publication, *Sparks Electrical News*. He continues; "The general attitude towards these aspects in South Africa is very poor compared to the attitude of our international students. In fact, my associates and colleagues from The Institution of Lighting Professionals in the United Kingdom and of those at The International Association of Lighting Designers in the USA and throughout the world, are so far ahead that I am continually inspired by them."

This is unsettling news. With the world shifting towards the next great technological transformation, the ability to move with the tide of innovation is essential for industry players to gain a competitive advantage and set the pace in the built environment.

McKinsey & Company partner, Gerhard Nel, reiterated the need for change in the industry. "This need is driven by an industry that is currently characterised by increasing complexity, changing customer preferences, sustainability considerations, a move to modular, a shortage of skilled labour and a stricter and more complex regulatory environment." He suggests new industry dynamics are at play with emerging disruptions such as industrialisation in the form of modularisation and product standardisation, as well as industrialising workflows from engineering to planning and procurement. "In addition, he says new entrants with new business models or unicorns will lead to disruption of the market."

Perhaps, Skudder and the other conference speakers' sentiments can be best summed up by Rukesh Raghubir, CEO of M&D Construction Group, who said: "We need to understand that as an industry, if we do not disrupt ourselves, someone else will do it for us." What are you doing in your day-to-day business to keep one eye on the near future?

*Gregg*

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Reflecting on what has happened over the past 12 months, architects around the world are reimagining how the office will look – and operate – as we forge ahead in the new year.



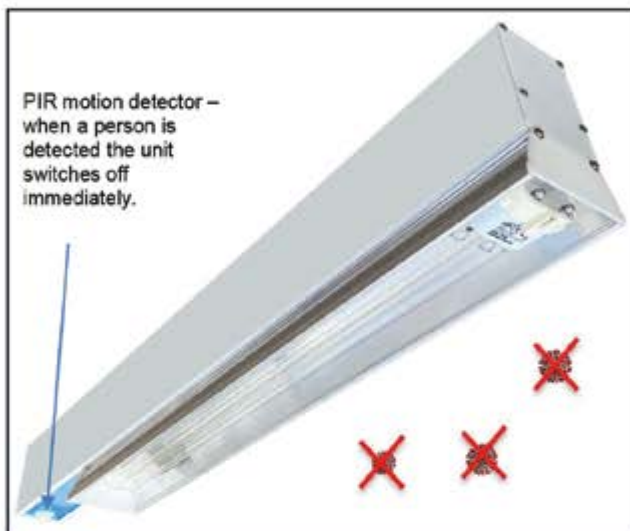
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## News

A round up of the latest industry lighting news, including LOA requirements in South Africa, a LED highbay lighting project by BEKA Schröder, a new anti-bacteria lighting player in SA and more.

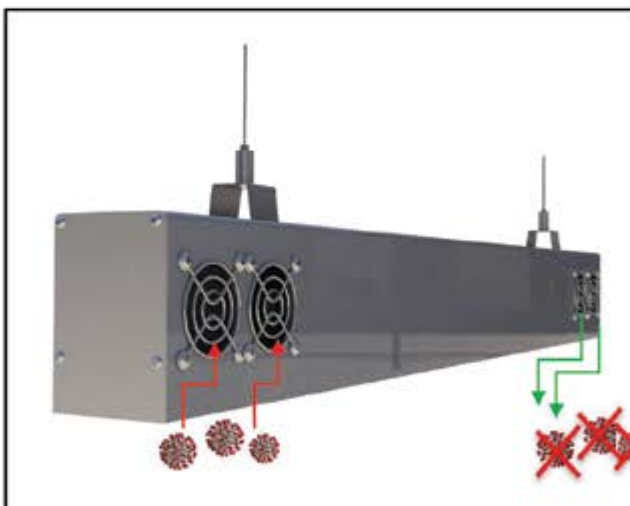
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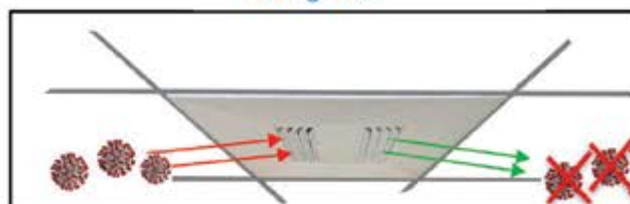


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# 'Countryside' lighting for village-style retail centre

The Neighbourhood Square is a retail centre designed to become an energised hub of The Neighbourhood, a residential lifestyle estate located on a portion of the old Huddle Park Golf Course in Linksfield, Johannesburg

Many large existing trees, which lined the greens on the old golf course, were positioned on the new site for the Neighbourhood Square. Respecting and accommodating these trees as a response to the natural heritage of the site-become a key design driver.

Early on, the design team identified suitable trees to preserve, and the design was manipulated to create a shopping centre that felt as though you were 'meandering through the trees'. The simple linear architecture of the building was intended to allow the building to become the backdrop for the landscape. Seamless transition from the densely forested landscape to shopfront was emphasised by a column-free canopy to allow maximum exposure for the tenants' shopfronts and to create a more engaging shopping environment.

The restaurant square and piazza form the community heart of not only the shopping centre but of the greater Neighbourhood precinct. The use of textures and planting emulate a traditional village square, creating a vibrant and interactive social space. Principles that are central in local retail design such as convenience, natural light



and fresh air, access to outdoor seating in coffee shops and restaurants, have become increasingly important post-COVID-19. The distinct shopping environment of the Neighbourhood Square provides ample opportunity for outdoor social engagement and easy access to essential retail outlets e.g., Checkers, DisChem. The intention is to create a community orientated centre that reflects the vibrancy of the neighbourhood that it serves.

The lighting design at The Square creates a visually comfortable environment with an outdoor night-time feel reminiscent of the countryside. Light fittings were positioned and chosen to highlight the architectural and landscaping features, with glare, colour temperature and intensity influencing the decision-making.

The arched columns that line the walkway utilised Radiant Lighting Solution's Shuttle double wall mounted light to create rhythmic pools of light along the walkway as well as soft indirect light from the ceiling. This single element unifies the scheme at night and makes the centre visible



#### PROFESSIONAL TEAM

**Client:** Investec Property

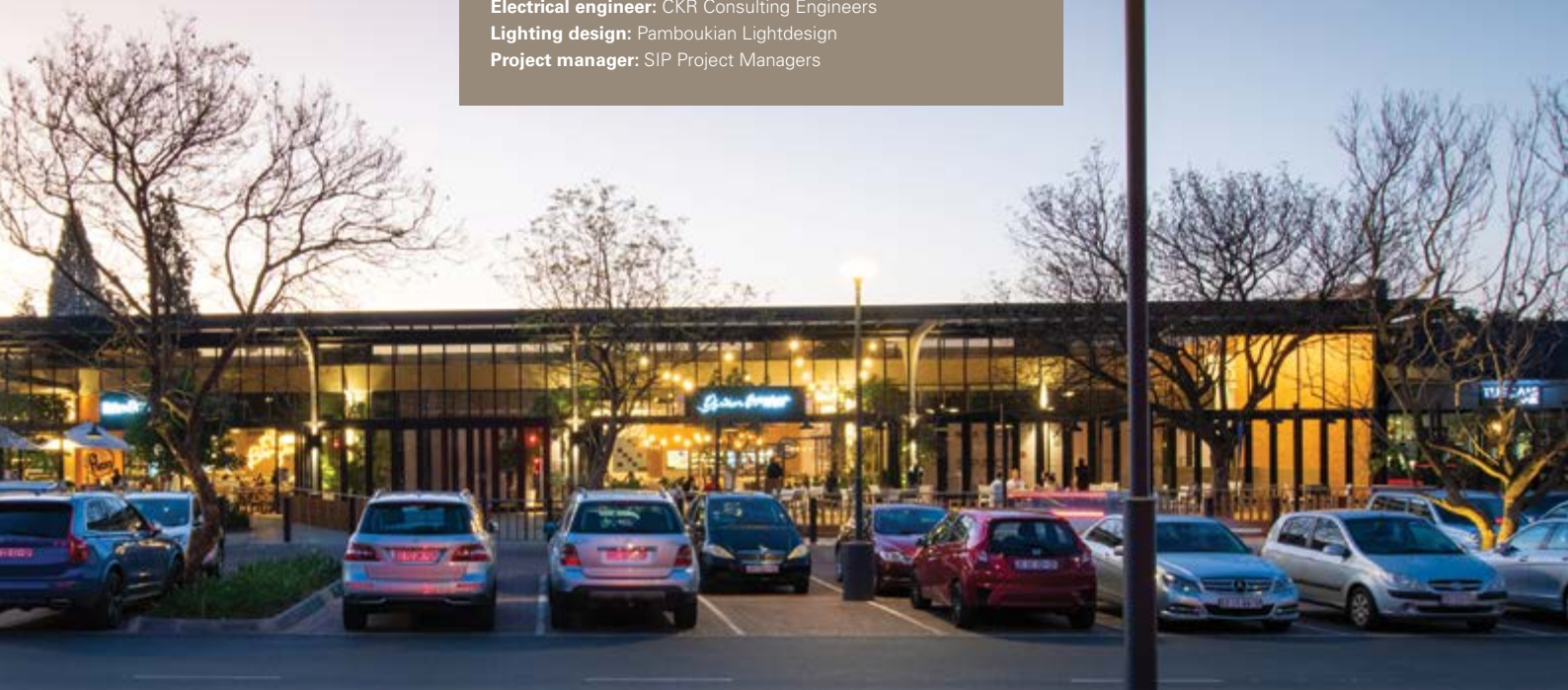
**Architects:** Boogertman + Partners

**Principal contractor:** Trencon Construction

**Electrical engineer:** CKR Consulting Engineers

**Lighting design:** Pamboukian Lightdesign

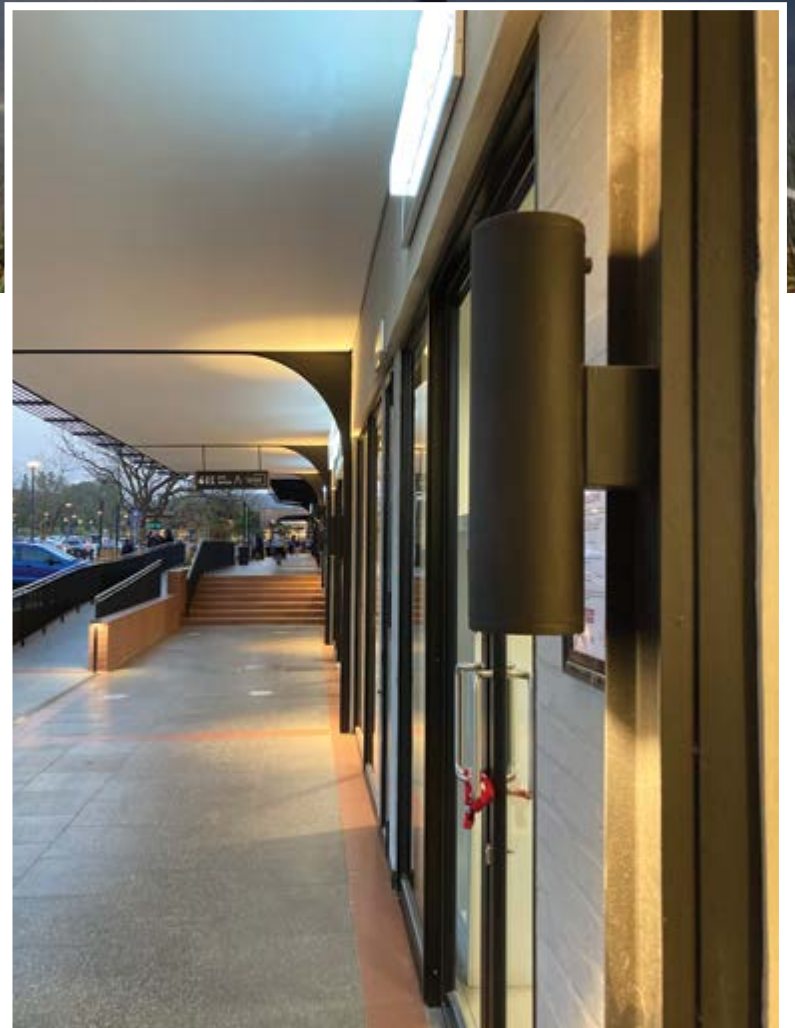
**Project manager:** SIP Project Managers



from the road. Tree uplights (Shuttle trunion and Kevo) were used extensively throughout to light the existing Jacaranda trees that surround the site.

Malta bollards were used in the planters along the walkway edge to highlight the low-level indigenous planting as well as indicating ramps and stairs.

**RLS supplied:** Starr 2 recessed downlight with LED Lamp 5 W warm white 2700 K; Shuttle plinth mount 18 W 300 0K LED charcoal grey; Sputnik trunion mounted charcoal grey 32 W Wide Beam 2700 K with cowl with anti-glare baffle; Malta bollard plinth mounted 16 W LED 3000 K Charcoal grey; Shuttle double wall mounted 36° Black c/w 2x18 W LED 3000 K and 500 mA Controller; Shuttle Trunion Mounted 36° Black; Kevo GU10 Spike mounted black; Argo indirect P/T clear acrylic diffuser mounted on modern stepped pole 4 m charcoal grey and Custom up and down post 2620 mm under canopy Shuttle frosted lens 2x24 W LED 3000 K. LID





# Harmonious lighting for Hazendal

A short distance from Cape Town, nestled against the Bottelary Hills, lies one of Stellenbosch's historic wine farms: Hazendal Wine Estate. The wine estate combines Russian and South African traditions for a unique winelands experience. *Lighting in Design* talked to Greg Segal about illuminating the majority of the vast estate.

**H**azendal's history began when German settler Christoffel Hazenwinkel made his way to South Africa's Cape. Hazenwinkel was a beadle of the Court and worked as messenger for Governor Willem Adriaan van der Stel, who in 1699 granted Christoffel Hazenwinkel 60 hectares of land in the Bottelary Hills of Stellenbosch. He named the farm Hazendal, which translates from Dutch to valley of the hares.

More recently, Hazendal was bought in 1994 by Dr. Mark Voloshin, the farm's current owner, and is managed as a family affair. His dream of wanting to preserve the estate's rich heritage, uplift the local community and create a unique Winelands destination, has added a new chapter to Hazendal's history.

In 2018, after extensive restoration and redevelopment of the estate, Hazendal reopened as a multi-faceted Winelands destination, bringing together the farm's rich history and heritage with contemporary design, innovative ideas and a Russian flavour.

Given that Dr. Voloshin's family reside all over the world, it was his dream to make Hazendal a place where he could reunite with his loved ones, as well as create a destination at which other families could do the same.

His steadfastness in wanting to preserve the estate's rich heritage, uplift the local community and realise his vision of a unique premium winelands destination gave rise to a massive restoration project.

## Hazendal's architecture

Architecture is defined as "the design of buildings and the space within the site that have as their principal purpose human occupancy or use." The architecture at Hazendal does just that. Born from a vision of being a destination venue, the design layout, grounds, service and décor are a macro







plan filled with multiple micro-experiences. The architectural language places people first rather than dominate the environment with its style. And, as is the case with so many great ideas, the result seems simple and effortless.

When asked to breathe life into their client's vision of contemporary and exciting new structures living harmoniously alongside 300-year-old buildings, Mike Hackner Architects took up the challenge. Maintaining the integrity of the heritage buildings, while offering state of the art new structures, they have created the elegant, harmonious and seamless blending of old and new that is delighting visitors to Hazendal.

The four original buildings that lie on a north-south axis on the property gave rise to a linear design language. Their positioning also formed a natural buffer between the public and private spaces on the estate and the focus of the Hazendal community is centred on the heritage werf (a farm homestead and farmyard), which also serves as an elegant foreground for sweeping views over the lake, the pavilion and the hills in the distance.





Paradoxically, the architecture is a study in contrasts and sympathy with the past. The clean lines of the new winery, restaurant, conference facility, admin block and edu-play centre are undeniably modern, yet they are submissive to the old in terms of scale.

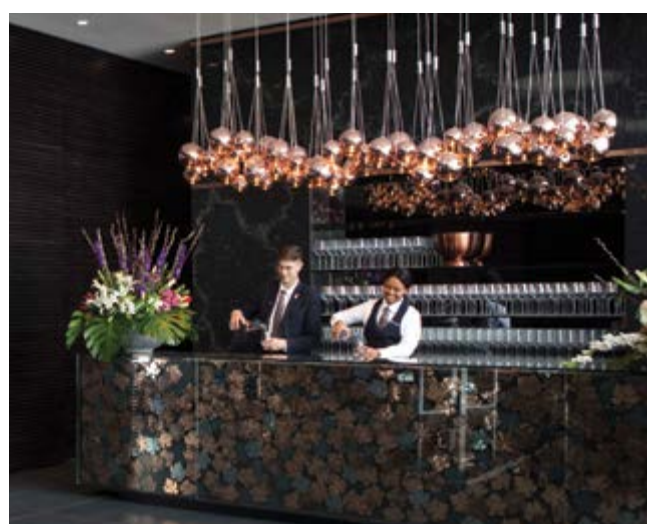
Some of the new buildings mimic the shape of a traditional Cape Dutch barn and are clad in a raw stone – a material used in the construction of the original farm over 300 years ago.

Undeniably beautiful, the architecture is also unassuming. And once the eye is caught by one

detail, the full beauty and ingenuity of the layout is revealed. The clean silhouette of the pavilion, the height of the dining room and subterranean suites are masterpieces of modernity without being showy. In short, Hazendal's architecture is a study of historic sensitivity re-imagined for the enjoyment of a contemporary guest.

### Q&A with Greg Segal

*Lighting in Design* caught up with Greg Segal from GS Lighting Consulting, the man responsible for





much of the lighting design at Hazendal to find out more about his views on lighting, the challenges he encountered on the project, and how to weave a 'golden thread' through the lighting of so many disparate buildings and spaces.

**Q:** Who is Greg Segal?

**A:** I am a Johannesburger born and raised. As a youngster, at school, I was involved in drama production on the backstage side and I was also into photography, so I always had a passion for the technical side of lighting and how it affects what we see. As one of the founders of Head Interiors with friends in Johannesburg in the late Seventies, and amongst other logistical aspects, I was the 'lighting guy'. I left Head after 14 years to move to Cape Town.

Due to my background, I was able to understand what architects and other designers wanted out of lighting, my business plan was to provide an outsource design and supply service to professionals as a lighting practitioner. I was fortunate to be able to work with the late, world renowned, Dr. H Einhorn, on several projects. He was Emeritus Professor of Electrical Engineering

and Lighting at the University of Cape Town. I had attended ILESA lighting courses where he was lecturing. He invited me to join his course on Illumination Engineering. This I did and I spent a year of university Wednesdays attending his lectures or working in the lab. This resulted, after the written exams, in my graduating with a certificate in Illumination Engineering from UCT.

In my early years in the lighting industry, I became a member of ILESA and SANCI. These merged in 1994 to become IESSA (Illumination Engineering Society of SA), and I am now a 'fellow' of the society.

You could say the lighting has been my passion for many years and I get great satisfaction from seeing projects when finally completed. The key word has always been 'seeing' and this is true today as lighting and 'seeing' are one and the same complex thing.

**Q:** How did you get involved at Hazendal?

**A:** My method of marketing with professionals is all by network interaction. Two architects, who were both working on projects at Hazendal, approached me because they wanted to have



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the relevant lighting knowledge and skills on the project. I also have an excellent working relationship with Paul von Zwicklitz, of Lewis & De Kroon, the Electrical Engineer, retained by the client to engineer the entire electrical requirement on the estate. We approached all the new lighting requirements as a team.

I started on the lighting plan for a new double volume conference centre. Designed by Chris Wood in joint venture with Mike Hackner, it is a multifunctional space with re-configurable areas. Stack away partitions allow for a multi-functional space. Chris wanted LEDs and wanted the lighting to be controlled somehow, but it was a difficult space with black ceilings and dark carpets. I started with a clean sheet of paper as there was no lighting plan at all. I believe that it is good to start from a blank slate, but the first thing you need to do is drill down into the mind of the architect or designer. Understand their vision and expectations for the project. Almost a reverse brief, I extract it from them by talking about lighting. Obviously, there are standards and a technical requirement for the lighting design. This is applied in the

background. I keep these conversations technical to a point.

One of the things I do, is apply Richard Kelly's design approach and look at three elements of light:

- Ambient Luminescence. This is the first fix requirement to bring the light level up to general suitable background feeling (and technical requirement for whatever the function of the space may be).
- Focal Glow. This will be areas and pools of light that are brighter than the background. This could be several times brighter than the background. The attention of the observer is drawn to these areas. This creates the so called 'pop' and visual interest as well as the apparent layering and additional spatial dimension. Light and shadow also add an edge here.
- Play of Brilliance (The stimulation of the spirit). This, in modern terms, may be called sparkle. An acceptable technical term.

This approach is softer than one that is based entirely on engineering and many clients find it much easier to buy into.





much easier to buy into.

**Q:** Was it a challenge working on so many projects at Hazendal, often with overlapping timelines?

**A:** There is no project which does not evolve or shift, at Hazendal though, as soon as we were finished with one project – or even in the midst of one – we would start working on the next.

After the conference centre, it was the admin portion of the building (which includes the main winery where you interact with the conference centre through glass partitions). Upstairs is an office level and I did the lighting layouts for all of these spaces. The conference centre lighting is all cutting edge, contemporary and was supplied by RLS.

While this was being completed, we started on the wedding pavilion, a new admin block, the Avante Garde Restaurant plus wine tasting rooms and a vodka tasting room which interact with the Avante Garde Restaurant. The admin building needed to talk to the heritage buildings – it is a really beautiful little modern building called The Admin Block.

At the same time the client renovated some of the old farm buildings and opened one up as a deli called Babushka in a renovated old Cape heritage building. We also relocated the Marvol Gallery (here the lighting was done by QDP) and renovated the Manor House, which was turned into a guest lodge (I did the landscape and exterior lighting and QDP did the interiors). One highlight for me is when you see white Wedding Pavilion illuminated at night the ... it doesn't need much light as it is very reflective, but a product from Delta in Europe was the only product that could achieve what the architect wanted.

Another phase was Wonderdal, an education and play building where visitors can drop off their kids while they go wine tasting or mountain bike riding. The architects also uncovered the remnants of a 17<sup>th</sup> century installation which they turned it into an outdoor venue called The Threshing Circle. A glass-walled modern building was then created as an open pavilion for the owner's vintage cars – it could be a 'Mies Van Der Rohe' transplanted from New York into the estate.

There have been about four or five phases, and all the while, the landscape lighting is continually being looked at and improved. Plans for the future include building a boutique hotel on the estate.

**Q:** Is it possible to have a 'golden thread' through so many different buildings?

**A:** The owners of Hazendal are internationals. They were educated in Europe – the first world – where they understand the value of design. The golden thread through all of the different projects was a golden client, a client that had, in some instances along the way, maybe a bigger vision for lighting than some of the professionals.

Challenges across the projects were primarily getting everybody on the same page, not really budget related. Technical challenges were few and far between because most of the projects were new builds. The landscape lighting installations were occasionally an issue as the area has a moving water table, meaning an area that was bone dry in summer was sodden in winter. Occasionally we did encounter issues with the quality of the installations, especially when they were rushed to get done in time for an opening. Overall, whatever I have done at Hazendal I am proud of and happy to show to people and put my name to.

**[www.gsllc.co.za](http://www.gsllc.co.za)**



Starbucks Castle Gate Lifestyle Centre

# Lighting for an iconic brand

How do you create an international impression, at local costs, for a global company?

Two years ago, Starbucks' four-year long foray into South Africa looked like it might have been a step too far. Taste Holdings, the franchisee which brought the US coffee retail brand to Johannesburg, was struggling to make the deal work.

After a review, Taste concluded it would need to spend nearly \$50 million and build 200 more stores over the next seven to eight years to be truly successful. The company realised it was an investment it could not afford. And then the global pandemic struck. There might have been the expectation that Starbucks' next South African licensee, Rand Group, which bought the business from Taste for R7 million a year ago, would have been badly hit in an economy that all but collapsed after a national lockdown in March 2020.

But instead, Starbucks South Africa is expanding with a multi-pronged retail approach and a focus on remote workers who need a break from working in their home environments. The strategy has seen the brand adding eight new outlets to the 14 stores already operating in and around Johannesburg and Durban, with new stores in Cape Town and Pretoria, among others, as well as the company's first store inside a grocery retail setting.

"Starbucks is an iconic global brand, and when the opportunity arose to expand it into my home country, particularly as this is one of few remaining scalable regions where Starbucks is yet to have a

strong presence, I grabbed the chance," says owner and CEO of Rand Capital Coffee, Adrian Maizey. "Our store designs are inspired by South African art and culture, creating a remarkably welcoming 'third place' experience that Starbucks customers know and love. Starbucks South Africa is fully committed to local prosperity and we have worked extensively with local contractors and artisans for the construction, design and décor of our stores."

Yet how much attention is given to the lighting utilised in each store. A quick glance at the Starbucks Design Guidelines will reveal that, 'Lighting is essential to any store design,' while the company's design mission is to 'create a unique and locally relevant Starbucks retail experience, creating a place which elicits a unique emotional connection between the customer and the experience in store.'

While Starbucks global out of London ultimately has control and final sign-off of the store designs, Maizey notes that effectively each store is unique. "For each of the new stores we put together a design brief and inspiration pages with a big focus on the lighting, and localising is a very big part of the ethos." A challenge is maintaining the same quality the brand is used to abroad, but at local costs.

The new direction of the company in South Africa is to scale down the size and make the stores warmer and more inviting. "The company originally built very big landmark stores, and even with many customers inside, they look cold and empty. The colour schemes were lightened, and the lighting was given the attention it deserves; lighting creates a mood, and we were very mindful of its effect in the new designs," he says.

Special attention was given to a number of areas, including the lighting of artworks, signage ("We wanted people to immediately recognise the Starbucks' siren, but didn't want to overdo it with neons," says Maizey), as well as above table lighting so that it doesn't reflect off menus.

"For us, lighting was very far from an afterthought," he says. "It can make or break a space, and we used it to not only create a sense of warmth, but to 'centre' the space within many of the new stores." He wasn't able to share the names of the companies involved in the supply of



Starbucks FreshX Rosebank





Starbucks FreshX  
Rosebank



Starbucks Camps Bay

lighting, but assured *Lighting in Design* that a healthy percentage of the fittings installed were from various South African suppliers.

Maizey has no plans just yet to step back from the frontline. "I spend more of my time these days on the store designs as opposed to any other part of the business," he says. "We have to deliver the right experience the first time. Maybe when we have 300 stores I won't be able to be as involved, but for now, I want to make sure that we are heading in the right direction." <sup>LiD</sup>



Starbucks Camps Bay

## New stores

### Rosebank, Johannesburg

The Rosebank store is the latest to form part of Checkers' FreshX brand which aims to take on up-market retailers. The FreshX concept stores were introduced by Checkers as a way for the company to gain market share among more affluent South Africans, with the idea proving so popular that the group now plans to revamp at least a third of its Checkers stores to the new look in the medium term.

Unlike traditional Checkers stores, the FreshX concept stores feature more upmarket furniture and signage – including benches and tables for customers to test samples. In November, Checkers announced a new partnership with Starbucks which will see the coffee house and roastery chain launch outlets in select supermarkets. Starbucks FreshX Rosebank is designed to complement the Starbucks Reserve offering, which is located outside the Rosebank Mall.

Maizey says of the FreshX Rosebank store; "It's a stunning store, designed to deliver the Starbucks experience in partnership with Checkers FreshX."

### Camps Bay, Cape Town

Playground to holidaymakers, jetsetters and sun-seekers, Camps Bay is renowned for its magnificent location at the foot of the Twelve Apostles mountain range – and now also for having a Starbucks with a one-of-a-kind view.

Maizey says, "The store design reflects ev-

erything special about both the brand and Camps Bay – it features an ocean-inspired colour scheme, spectacular murals by local artist, Justin B, and two outdoor terraces to soak up the uniquely Camps Bay ambience. The lighting fixtures here were chosen to give a 'beach-bar feel' to the store."

### Castle Gate Lifestyle Centre, Pretoria

Castle Gate is Starbucks' first neighbourhood store in Gauteng and was also the second in the rollout of eight stores in four weeks, which saw six opening in Cape Town, one in Rosebank and the Castle Gate Lifestyle Mall.

Castle Gate, which enjoys a prime, easily accessible location on Solomon Mahlangu Drive in Waterkloof Ridge, is a mixed-use precinct which is under development in phases, with the first phase consisting of a 23 000m<sup>2</sup> convenience centre, housing the Starbucks store.

### Stellenbosch, Cape Town

The brand-new Starbucks café in Stellenbosch is located in the upmarket Checkers FreshX store overlooking Die Braak, the picturesque town square that is flanked by a beautiful Cape Dutch style church and other historical buildings.

In partnership with supermarket chain Checkers, Starbucks FreshX aims to be a one-stop option whether people want to eat, work, shop or do all three.

# An office block with curves in all the right places

Rabie Property Group's new 7 000m<sup>2</sup> office building in Century City, Cape Town, is ideal for future-focused, environmentally aware corporates looking for stand-out premises.

**S**ituated along Sable Road in Century City, Sable Corner is an A-grade office building containing four levels of commercial office space, a ground floor and two levels of basement parking. The development forms a notable and cohesive gateway to the blossoming Bridgeways Precinct.

Drawing from local typology, the office floors sit above a landscaped parking podium with an elevated ground level providing high public visibility. Facing Cape Town's CBD and Table Mountain, the development forms a striking edge to the major road whilst responding to the views and aspect opportunities that the island site provides. The design ethos is driven by the constraints and possibilities of the site, the existing precinct network and the anticipated link to the future Ratanga Precinct.

The irregular shape of the site is highlighted via the building's double-sided form and striking finned curved face that contrasts a formal dark regular block-like edge. The dual faces of the building not only respond to the site's views but corroborate the strength of the corner location as an access point to Ratanga Precinct.

The highly original form of the building, designed by award-winning dhk Architects, includes a glazed circulation staircase and lift lobby that link the convex-shaped section of the building to a rectangular appendix, allowing for economical office design without compromising on the spectacular curved facade that opens up unobstructed views of Table Mountain, Signal Hill and Table Bay.

"Underlying this slick design, is of course, the very important Green Building design techniques, smart design principles, clutter-free entrances and exits and direct access to secure basement parking," says Jason Elley of the Rabie Property. "Sable Corner's Green Building design isn't only good for the planet. Fresh air and natural lighting make for a healthier, happier workspace, while water and energy-efficient technology reduces the overall running costs of the building."

## Lighting design

The effective lighting of a façade can turn a build-

ing into a real eye-catcher from far away. Lighting can be used to accentuate the architecture and possibly emphasize the logo and the company name. The interplay between light and shadow can increase the overall impact and can leave a lasting impression.

**Curved façade:** Regent Lighting Solutions (RLS) developed a new purpose built luminaire called the Echo Leia to illuminate each fin individually with a very narrow beam of light, further enhancing this already fabulous looking facade.





**LED signage frame:** A first for RLS, the company was tasked with designing and manufacturing a large façade mounted rectangular signage frame. Measuring around 15m x 8.5m, this was no small task for the company's designers who had to come up with a solution that gave the desired effect. Each section had to be precision designed to fit perfectly when installed on site. Some of the challenges to be overcome were a curved wall, the potential water ingress (IP), special LED colour and a custom size profile as requested by the architects. The end result speaks for itself and the company believes this landmark feature will be enjoyed by both the customer as well as those driving past for many years to come.

**Main entrance:** Mounted on the bulkhead in front of the main entrance door is a bespoke Linear Mini, surface mounted in the shape of a large hashtag. This complicated shape makes a significant impression on anyone entering the prestigious building.

**General precinct:** Continuing with the rest of the Century City square precinct, Europa Post Tops mounted on Europa poles and Acer surface mounted footlights were utilised. **LiD**



#### PROJECT TEAM

**Developer:** Rabie Property Group

**Architects:** DHK Architects

**Electrical engineers:** QDP Consulting Engineers

**Main contractor:** WBHO

**Electrical contractor:** ERC Electrical Contractors

# True colours for Metropolitan Cape Town

In architecture, the façade of the building offers a key area for the architect to showcase his or her artistic impression and highlight the concept of the building, as it sets the tone for the rest of the building.



**F**açade lighting, which is also part of the façade design, is used not only to localise the building and provide security, but also to play a key role in expressing the architectural and artistic impression of the building.

The lighting draws attention to the textures, colours and forms of space, helping the architect to achieve the true purpose of his or her design. As it has been said before, vision is the single most important sense through which we enjoy architecture, and lighting further enhances the way we perceive architecture. In recent years, façade design has been the signature of famous architectural firms, who want to leave a mark through their unconventional façade design that stands out, and lighting is key to helping them emphasise their uniqueness.

## **Good façade lighting should have the following key aspects such as:**

### **Aesthetic:**

As the whole purpose of façade lighting is to add value to the design, it is only natural that aesthetic forms a major aspect of façade lighting. The aesthetic is where designers and architects focus on the emotional impact their designs will have on the occupants of their buildings. It also determines how the occupants feel when they walk around the space. Aesthetics have become an important crowd-pulling aspect for retail locations, where the consumers are drawn through the design and lighting of the façade.

### **Function:**

Though aesthetic comes as a natural requirement of façade lighting, the less known aspect of its function is the most important factor in the façade lighting. Lighting is mixed-use and we all want it to look a certain way, but we also want to ensure that it serves its most important purpose, in this case, the illumination of the building and creating visibility.

Research studies suggest that lighting has a high index of disrupting the thermal comfort of the occupants of a building. If it goes higher or lower than the expected level, it can create a strain on visibility, causing discomfort among the occupants. Hence, the optimum façade lighting should ensure



proper illumination that allows occupants feel soothing to comfortably take in the entire building. The lighting should also bring out the differences in the design or structure of the façade.

#### **Efficiency:**

In the age of green and sustainable buildings, façades have gained more prominence in ensuring the sustainability index of the entire building. One aspect is to create a breathtaking façade lighting, entirely another one is to create a breathtaking layout that is also energy efficient. This can be done by ensuring that the majority of the light reaches its target so there is less wastage of light. Reducing the amount of wasted light will make the façade more efficient.

### **Lighting for Metropolitan Durbanville**

Metropolitan, a leading insurance and investment company, wanted to light their front façade of their building using colours that would project their brand identity. They chose a dynamic colour-changing LED solution to replace the current five Mercury Vapour 400 W mono white flood lights installed.

"Metropolitan wanted to enhance the lighting aesthetic and appeal of the architectural lighting of its Durbanville campus. In doing so, the company aimed to ensure the desired impact on its customer facilities in order to improve the customer experience at that particular touchpoint," says Ross Blakeway, CEO of Solid State Lighting International.

#### **Customer challenge**

At the front façade, the five 400 W mono white flood lights consumed 2 kW of electricity per hour. Metropolitan wanted the

façade to be washed in a blue light instead of mono white to reflect its corporate branding strategy and increase the visual impact, while at the same time delivering energy savings through the replacement LED solution installed.

### **The right lighting**

Solid State Lighting International (SSLi) worked very closely with Metropolitan to understand their requirements, which included aligning with the company brand colours and using an energy efficient-low maintenance solution.

Seven VAYA LED floods with various beam angles were used to ensure proper coverage of the front façade of the Durbanville head office. This helped "bathe" the building in a blue wash of light in the desired manner.

Each LED flood light consumes 68 W for a total power consumption of 476 W compared to the 2000 W that the MV flood lights consumed per hour, bringing about a 75% reduction in energy usage. The VAYA LED flood lights are also low maintenance fittings with a life expectancy of more than 50 000 hours.

[www.lighting.philips.co.za](http://www.lighting.philips.co.za)



# Office design trends for 2021

Reflecting on what has happened over the past 12 months, architects around the world are reimagining how the office will look – and operate – as we forge ahead in the new year.

**T**he big question is: how can our working environments best support remote working and physical distancing without compromising people's productivity and sense of wellbeing? According to trend forecasters, 'resimercial' design, videoconferencing, workstation neighbourhoods, design-led divisions and sustainability will play a key role in the office of 2021.

## Resimercial design

Resimercial design mixes residential and commercial features to make employees feel at home in the workspace. The trend emerged when Millennials and Gen Zs – the people who grew up with technology and are familiar with the notion of working any time, any place – started to form the majority of the workforce.

COVID-19 is catalysing this trend. In 2021, expect to see decorative touches associated with the home environment and comfortable furnishings, particularly in breakout spaces.

Resimercial features include:

- Mix of textures/silhouettes.
- Natural light/ambient lighting.
- Wool rugs, large, curtained windows.
- Classic house plants.
- Comfortable seating.
- Durable upholstery.
- Natural fibres.

## Videoconferencing provision

According to research by PwC, over half of executives expect to offer remote working in the near future and the majority of employees want to work from home at least part-time. So, when we are in the office, it is likely that we will be interfacing regularly with remote employees.

With dispersed teams becoming the norm, videoconferencing will play a critical role in maintaining connection and facilitating collaboration. The physical environment will have to adapt to accommodate screens, cameras and microphones, allowing teams to leverage videoconferencing to its full potential.

Expect to see:

- Smart interactive whiteboards.
- Cameras and microphones that automatically hone in on speakers.



- Multiple screens for large in-house meetings.
- Reconfigurations based on acoustic needs.

## Workstation neighbourhoods

Large, open plan workstations have proven popular in recent years, however, in light of widespread remote working, office designers are having to re-think layouts. The fact that more of us are having to take more videoconferencing calls is making it harder for open plan workspaces to accommodate hybrid working because of acoustical issues.

To counteract this, office architects are grouping desks into 'neighbourhoods' for when teams need to co-locate. These neighbourhoods – also known as pivot spaces – are specific areas containing movable furniture that can be reconfigured with ease.

Neighbourhoods are equipped with:

- Touchdown stations.
- Digital whiteboards.
- Dedicated videoconferencing rooms.
- Work pods for individual work.

## Design-led division

A lot of office operators installed Perspex or glass screens in the immediate aftermath of the outbreak to help mitigate the spread of the virus. However, some designers are now considering other design-led options that still enable physical distancing but a) are more visually appealing and b) will be a more viable long-term solution.

The challenge is to come up with ways of co-dividing space that will not impede infection control or compromise the appeal and functionality of the space. At the end of the day, employees need to





feel safe, but they also want to feel connected to their workplace.

## Lighting in a post-COVID world

While the widespread shutdowns that have accompanied the current pandemic have changed our thinking about what offices should be and will be in the post-pandemic future, throwing widespread uncertainty over the design of offices, several overarching areas of focus have emerged – and each is impacted by lighting.

### Versatility

Future workspaces will need to respond to the desire for greater flexibility to change the space or reconfigure on the fly to accommodate different work styles or needs, or respond to something like the coronavirus pandemic. With new lighting technologies, advanced controls allow reconfiguration of a system via software – eliminating the need for rewiring when a workspace needs to change or serve a new function. In some cases, these systems allow for control from a remote location – even from home – and can be used to shut down parts of the system that are not in use, or set to maximise power savings, reducing cost for building operators. Advanced technology will also streamline troubleshooting in lighting systems, flagging a failing fixture, for instance, and allowing maintenance crews to respond before a repair ticket is even created by users in the space.

### Individual choice

Building in the ability to allow individuals to control their own working environment will take on greater

importance in offices of the future, becoming a key amenity and allowing companies to become more inclusive. These changes will not only allow end users to follow their preferences, they can allow disabled or neurodivergent people to customise their environments in ways that allow them to achieve greater success and participation in the workplace.

Lighting has a key role to play, with advancements in fixtures and controls that allow seamless control by end users from a workstation, phone, or even a mobile device. Workers will be able to control colour tuning and dimming, setting an individual quality of light which can then follow them if they are assigned a new space, simply by shifting their settings to the new area.

Obviously, best practices for these systems will include some limits on end user control, but the ability to create settings that conform to individual workspaces is nearly limitless.

## Health and wellness

Health and wellness are concerns that have taken on new urgency during the pandemic – and are likely to remain top of mind in every arena moving forward, including in our office spaces. One aspect of creating a truly healthy office is creating the appropriate quality of light.

As mammals, our bodies want connection to daylight. We need to experience the daily rhythm of morning, noon, night, and a physical connection to light helps to foster good health. Yet, in a workplace we cannot all be next to a window. Advanced lighting systems allow for white tuning that mimics daylight and can be calibrated to each location based on distance from actual sunlight. This has been shown to maintain worker productivity and health, and is a simple way to invest in the well-being of the workforce as employers look to create a quality environment for their employees. Digital lighting protocols make it easy to set up and maintain, which means we will see increased attention to this detail in future offices.

### Safety

Enhanced safety in the workplace will continue to be a concern moving forward, and lighting offers several advanced security capabilities within the workplace. Fixtures with built-in sensors can track the movement of people and portable equipment as well as space use, providing an added layer of security and safety. Lighting can also be used to enhance wayfinding techniques, and to encourage specific traffic patterns which can help create social distancing. Sensors also can create cost savings: Studies have also shown that when there is a sensor per fixture, users are less likely to override them, saving more energy. With a careful eye to the overall lighting design, these sensors can be implemented without affecting the quality of light within a space. LiD

## LOA requirements in South Africa

In the South African market, all electronic equipment either manufactured locally or imported from overseas needs to adhere to and comply with certain compulsory regulations set out by the National Regulator of Compulsory Specifications (NRCS) in order for them to be sold in the South African market. These goods go through a series of tests to ensure the safety and energy efficiency of the electrical apparatus which, in turn, protects the health and safety of the consumer. After the inspection has been completed and it is found that the item is deemed safe to use in the South African market, an LOA (Letter of Authority) is issued for the particular item. No electrical goods can be sold legally in South Africa without having a valid LOA in place.

As for luminaires, according to the VC 8055 document published by Government on the 6<sup>th</sup> of February 2009 there are a few exclusions in terms of LOA requirements for luminaires, which includes luminaires imported as parts and not as complete products.

Spazio Lighting has become aware that certain suppliers have taken on the habit of importing and selling downlighters in parts where the lamp holders are sold separately from the body of the fitting. By adopting this practice, the importer is clearing the goods through customs as parts instead of a complete product and thus there is no need to obtain an LOA certificate.

Furthermore, they also sell the goods to their distributors in parts, once again circumventing the

LOA requirement.

Unfortunately, in doing so the supplier passes on the Legal Liability for an LOA to you, the reseller who, unaware of the liability, supplies to the consumer a product which might have a long-term defect and deem installations to be illegal if inspected.

In this instance, the electrician becomes the manufacturer or assembler and therefore strictly, according to regulations, the electrician is responsible for the compliance of the product and should acquire an LOA and pay the levies to the NRCS which, in most cases, is not done.

Spazio Lighting is a member of SAFEhouse SA, a non-profit industry organisation that investigates and acts on reports of non-compliance in the lighting and electrical industry by firstly notifying a supplier of non-compliant products and giving them the opportunity to take voluntary corrective action. If this is not done, they then report the non-compliance to the NRCS in order to stop the sale of such products.

The company would like to strongly advise its distributors to only buy electrical products from suppliers who are members of SAFEhouse seeing as SAFEhouse members take on the pledge to abide by the SAFEhouse code of conduct and only supply goods which are NRCS approved.

Spazio Lighting would also like to motivate suppliers to become members and take on the fight against substandard and non-conforming products and practices existing in the South African market.

**[www.spaziolighting.com](http://www.spaziolighting.com)**

## LED highbay lighting for manufacturing plant

BEKA Schröder is proud to have supplied the LED highbay lighting solution for Strado Truck & Trailer Remanufacturers' new manufacturing plant in Bloemfontein.

The recently launched ECOBAY, an LED low-

bay and highbay lighting range, was the luminaire of choice due to its reliable performance, low dust accumulation, versatility and no need for relamping and regular maintenance.

The ECOBAY, designed and manufactured in South Africa, is the ideal luminaire for lighting industrial facilities at optimised light levels. It offers substantial

energy savings, high performance and is able to operate at high ambient temperatures. Available with four typical lumen packages and various light distributions, the ECOBAY is perfectly suited for multiple indoor lighting applications.

The ECOBAY not only lowers your initial investment. It maximises it by providing a comfortable environment for your staff while limiting energy consumption to what is absolutely necessary.

### **The right lighting makes the difference**

As the average annual energy bill continues to rise, owners, operators, and managers of industrial facilities need to cut costs and improve employee productivity. BEKA Schröder's LED lighting solutions enable you to transform your lighting from a necessary expense to a strategic asset by:



*The locally designed and manufactured ECOBAY illuminates the Strado Truck & Trailer Remanufacturers' new manufacturing plant.*



## More design freedom for stylish lighting solutions

Not only in retail shops and state-of-the-art office landscapes, but also in hotels and hospitality businesses, spotlights and downlights in ever smaller dimensions are nowadays in great demand in order to create particularly slim and filigree designs. The LED drivers of the new OT FIT NFC product range are perfectly in line with this general trend. The Compact SELV LED drivers (15, 25 and 40 W and output currents of up to 1 A) come in highly compact dimensions – simply ideal for integrating them into small luminaire housings. Both luminaire manufacturers and lighting designers thus benefit from more design freedom when it comes to the layout of lighting systems. And thanks to optimal strain relief, SELV drivers are also the right choice for independent installation.

### Superior lighting quality and flexible programming

The devices comply with the requirements of the latest PSTLM and SVM regulations – and thanks to the low output ripple current, they achieve superior lighting quality and high efficiency. Their wide operating window makes them highly versatile for use in numerous luminaire types and applications. This allows luminaire manufacturers and lighting planners to reduce the number of different types and use the product range flexibly for all kinds of projects. The T4T software from Osram makes driver programming quick, user-friendly and convenient via the NFC interface (current setting in steps of 1 mA is possible across the entire operating window). Enjoy more freedom in designing your individual luminaire systems!

[www.osram.com](http://www.osram.com)

- Reducing energy and operating costs considerably.
- Complying with health and safety standard light level requirements.
- Creating a comfortable working environment for better productivity and quality of work.
- Providing a quick return of investment.

Strado Truck & Trailer Remanufacturers were left satisfied with a fast turnaround time from the design stage to installation. The result has exceeded everyone's expectations.

BEKA Schröder locally develops and manufactures energy-efficient LED lighting products, designed and suitable for local conditions. We are very proud to be associated with Strado Truck & Trailer Remanufacturers in providing a successful highway lighting solution for this project.

[www.beka-schroeder.co.za](http://www.beka-schroeder.co.za)

## Major deal with R50bn US corporation brings anti-bacteria lighting revolution to SA

A South African company has clinched a deal to distribute a revolutionary lighting technology able to suppress bacteria in the air and on surfaces using a narrow spectrum of visible light.

The licencing agreement covering the innovation named SpectraClean™ involves Johannesburg-based Genstar Emergency Lighting Solutions (GELS) and Hubbell Lighting, a lighting manufacturer headquartered in South Carolina, USA.

GELS director Drew Donald highlights the crucial timing of the transaction, given South Africa's halting emergence from the depths of the Covid-19 pandemic. "Indeed, every person, every industry and all government have a moral and economic obligation to develop new methods of thinking to prevent similar negative spinoffs from the next health crisis."

He explains that the SpectraClean™ technology cleans every area of a room, at different rates based on the distance from the light source and the time taken to disinfect the relevant area.

"Laboratory experiments and case studies show a more than 90% microbe reduction in treated environments in one day. In actively used facilities SpectraClean™ continuously reduces microbes at all times and significantly reduces the frequency of manual chemical cleaning. Unlike UV-C, SpectraClean™ is harmless to humans, materials and surfaces. "The ramifications are immense, both in term of hygiene, safety and cost savings."

GELS's licence agreement with Hubbell enables GELS to assemble the relevant control board in South Africa, with the 405 nm chips being supplied exclusively by Hubbell. Accordingly, GELS has appointed a KZN manufacturer to populate the board. Donald says such an arrangement contains positive ramifications for employment in particular and for the KZN economy in general.

He expects the initial agreement with Hubbell to yield many additional benefits to GELS owing to Hubbell's position as the exclusive licensee to selected applications of Scotland's University of Strathclyde lighting technology.

"Strathclyde's high intensity narrow spectrum lighting technology boasts a world-class research team at the cutting edge of global innovation. Its close ties to Hubbell and our new association with the Americans bode well for prospective new horizons. Our licence allows us to link the technology back to the University of Strathclyde such that we will participate in any new research/developments."

David Early, director at Hubbell Lighting Components, says: "With more than 130 years of experience illuminating and electrifying the world, Hubbell has a rich history of making product innovations that support customers in key markets and industries."

He maintains that the South African deal will provide added global coverage to Hubbell's suppression of harmful bacteria growth.

"Instructively, our lighting technology provides significantly greater reductions of bacterial pathogens in the environment than can be achieved by cleaning and disinfection alone, providing a huge step forward in preventing the spread of infection." The agreement with GELS covers all of Southern Africa.

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## Aging exit sign brightness study

As lumen depreciation is a significant failure mode with LED lighting, it raises the question of whether some older exit signs are still producing sufficient brightness to be visible in smoky conditions. This is the subject of a new study being undertaken by NALMCO in partnership with the Icahn School of Medicine at Mount Sinai in New York.

Before the LED became a successful illuminator, its first major application was as an indicator, such as in exit signs.

LEDs offer significant advantages compared to the incandescent and compact fluorescent lamps traditionally used in exit signs: higher efficiency, longer life, red or green light without a colour filter, compact size and relatively higher degree of vibration resistance. However, LEDs' lumen depreciation is a significant mode of mortality, alongside colour shift and control gear failure. Where maintaining light levels is critical for safety or productivity, light levels should be monitored as part of a maintenance programme and the luminaires replaced if they decline below a target threshold.

Should the brightness of an exit sign significantly decline, it may have poor or no visibility in emergency conditions. Many building managers are likely not aware of the difference.

Current standards require a minimum design brightness for new exit signs and language stating brightness can decline over time. Otherwise, aside from routine inspections, there are no consistent practices to test existing exit signs for brightness. It is true that direct-emitting red LEDs enjoy generally good lumen maintenance, but performance varies across products, and whether the LEDs are low, medium or high power. Manufacturer testing for high-power, red LEDs can produce a lifetime of 36,000 hours, which at continuous operation is around 4½ years.

As a result, it is possible that a significant number of older exit signs are operating but may no longer produce sufficient brightness. If true, building managers would be encouraged to beef up their maintenance practices to test their exit signs and replace as needed.

At this point, it's all a hypothesis. The Icahn School of Medicine at Mount Sinai in New York is testing it in a study sponsored by Colorado Lighting, Denver; the interNational Association of Lighting Management Companies, Ankeny, Iowa; and the primary funder, the Jim H. McClung Lighting Research Foundation, Atlanta. Mariana Figueiro, former research director at the Lighting Research Center at Rensselaer Polytechnic Institute, Troy,

N.Y., and a number of LRC staff work at Icahn.

Lasting about a year, this study aims to develop a method to measure average exit sign brightness in the field, discover if there is a connection between age and brightness among tested installed exit signs and achieve insight into the frequency of exit signs not meeting minimum brightness requirements. Researchers anticipate following up with a larger study that will include more locations and applications. The overarching goal for this initial effort is to see if this is a real problem, how big it is and what can be done about it with maintenance best practices.

### The study is being undertaken in five steps:

**Literature review:** The researchers will examine published studies, recommended practices, specification guides, industry standards, and how exit signs are specified, installed and maintained.

**Develop field measurement procedure:** Armed with the above information, the researchers will develop a procedure for measuring brightness in the field based on product samples. Measurements will be evaluated using techniques, such as portable luminance meters, digital imaging methods and luminance mapping. These methods will then be compared for simplicity, accuracy, cost, etc.

**Field measurements:** The researchers will conduct measurements for a target of 100-120 exit signs of various ages, installed in at least two locations and featuring a roughly equal mix of red and green LEDs.

**Technical analysis:** If the hypothesis—that a significant portion of older exit signs produces insufficient brightness—is confirmed, the researchers will compare the rate of lumen depreciation against expected depreciation. If the hypothesis fails, they will still gain an estimate of the portion of exit signs that produce insufficient brightness, regardless of age.

**Presentation of results:** A roundtable of the project team and stakeholders, such as industry and safety associations and manufacturers, will discuss appropriate next steps, such as potential modifications to existing standards. The member will publish a report.

Should the hypothesis be accurate, it may create opportunities to engage building managers about their risks and provide field-measurement services and installation of new exit signs.



## Ulster Hospital features patient-centred lighting with Blue-tooth control

Why shouldn't a hospital be a welcoming and attractive space that puts patients at their ease? That was the question the design team working on the new 32,000 square metre Acute Services Block at the Ulster Hospital in Belfast asked itself. The result is a lighting concept that owes more to boutique hotels or flagship offices and features a patient-centred lighting installation from ERCO with the latest wireless Casambi Bluetooth control. The illumination has been carefully planned by the building services consultancy Cundall to complement the architecture and emphasise the patient-centric experience. Instead of the usual uniform and often high-glare illumination from LED panels, Cundall has created a scheme with texture, hierarchy and visual interest. Emphasis has been placed on the illumination of the walls rather than the floors and the former feature distinctive scalloping which punctuate any journey through the building.

### Glare-free luminaires for high visual comfort

A key lighting tool in the project is ERCO's Compar range of linear recessed luminaires, which have a striking cellular design and ensure excellent visual comfort. Compared to standard 600 mm by 600 mm LED panels, the visible face of Compar (38 W) is only 7% the size, while delivering the same luminous flux. In the corridors, the Compar units are offset so that patients being moved on trolleys through the hospital experience no glare while in transit. This was important because regular bursts of glare like this, while highly discomforting, can trigger more serious reactions in those susceptible. Other thoughtful touches to the planning of the lighting include the use of variation in colour temperature to create a subtle, visual hierarchy across the building.

Wards, clinical rooms and circulation spaces feature LEDs with a cool colour temperature of 4000 K while the restaurant features warm white





3000 K sources. A track and spot approach with ERCO's Oseris here brings pools of light to the tables and gives a soothing café environment for visitors.

#### **Simple, individual light control via Bluetooth**

The control of the lighting was always a major consideration at the Ulster Hospital and Cundall began considering a control strategy back in the initial design stages of the project in 2016. An exciting platform then emerging was Bluetooth, a topology in which luminaires and other control devices form a network and communicate directly with each other rather than via a central controller. ERCO was one of the first companies to realise its potential and integrated Bluetooth technology from Casambi into its in-house developed control gear.

Without additional hardware such as a central management system, the luminaires communicate directly with each other and with other devices including switches, dimmers and PIRs. The lighting can also be controlled by a smartphone or tablet app using the Bluetooth Low Energy wireless standard. "The project was highly versatile, with many different areas and with different requirements," says the lighting designer, Chris McAnearney of Cundall, "so we needed a solution that was easy to use, and with the ability to make necessary adjustments, as per the clients' wishes." A unique function is in the patient's bedroom, where several sensors monitor 'out of bed' movement and alert nurses if a patient has left her or his bed. As is normal on projects of this type, the luminaire specification was subject to rigorous value engineering analysis. However, to the client, the selection represented clear long-term value in terms of the

total cost of ownership, the reduction of disturbance to patients due to maintenance and the light quality.

#### **Connecting the indoors and outdoors**

The outdoor spaces have been equally well considered by the design team. Here Castor bollard luminaires help visually connect the indoors with the outdoors. Eliminating light pollution was a priority in these spaces, so ERCO's Dark Sky technology – which prevents emission of light above the horizontal – was a key feature of the specification.

The Castor bollards guide visitors, staff and patients safely along granite paths to the entrance of the building. Meanwhile, in the internal courtyard terraces, trees and planters are illuminated by ERCO's Gecko luminaire. Its refined power is achieved by combining a slightly conical shape with design details such as seamless transitions.

The small housing conceals sophisticated photometric properties including excellent glare control and a virtually invisible light source. In fact, the exterior luminaires use the same precision optics that ERCO includes in its best-in-class spotlights for museums and art galleries. Additionally, the luminaire head can be tilted and rotated in any direction, allowing precise commissioning by adjusting the head to the exact position required.

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