

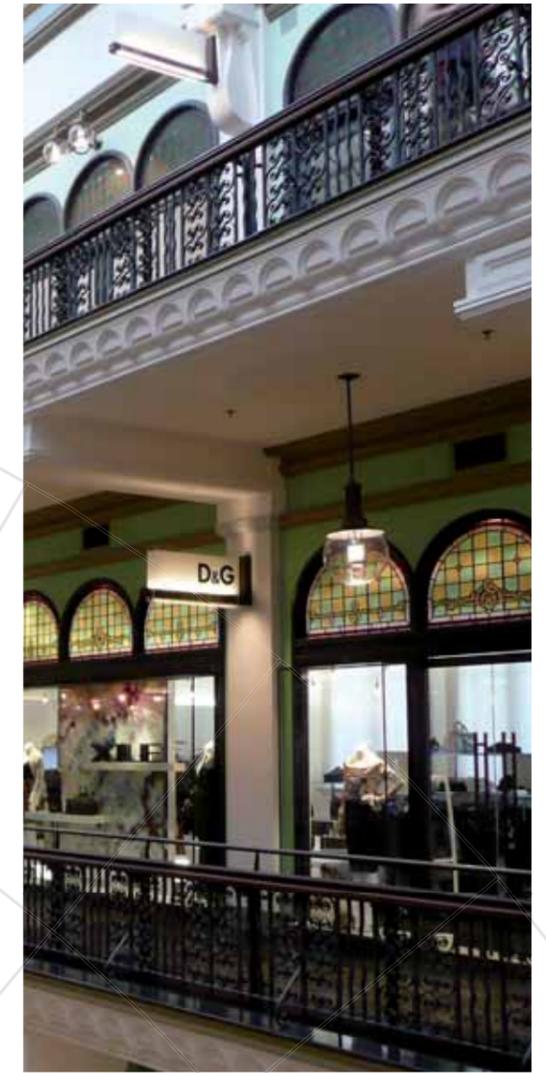
AWARD of Excellence

3S LIGHTING

has received prestigious IES Luminaire Design-Award of Excellence for Australia and New Zealand for

Queen Victoria Building

in Sydney for the QVB pendant luminaire which was developed in conjunction with Bassett Consulting Engineers and manufactured by 3S Lighting.



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PROJECT BRIEF

When Tim Schotbolt phoned me sometime in May 2007 to meet him at the QV Building in the city for a really challenging lighting problem, I had no idea what I was in for. When Tim showed me the string of pearls pendants and what the brief was:

- A.** To keep the essential traditional look and character of the fitting but using a clear glass sphere.
- B.** To use energy saving HIT lamps
- C.** To have a shielded lamp with an optic for a majority downlight component
- D.** To somehow give the glass sphere a glow of light and to have a bit of uplight component.

I thought, this is not possible to achieve. However the next step was to get a complete pendant from site for inspection and appraisal to find a suitable solution.

CHALLENGES FACED

After receiving the sample and taking the opal sphere off, I thought; "O my God, what did I take on here". None of the existing internal parts were even remotely useful for achieving

anything close to the brief. But I'm a great believer that for every problem there is a solution.

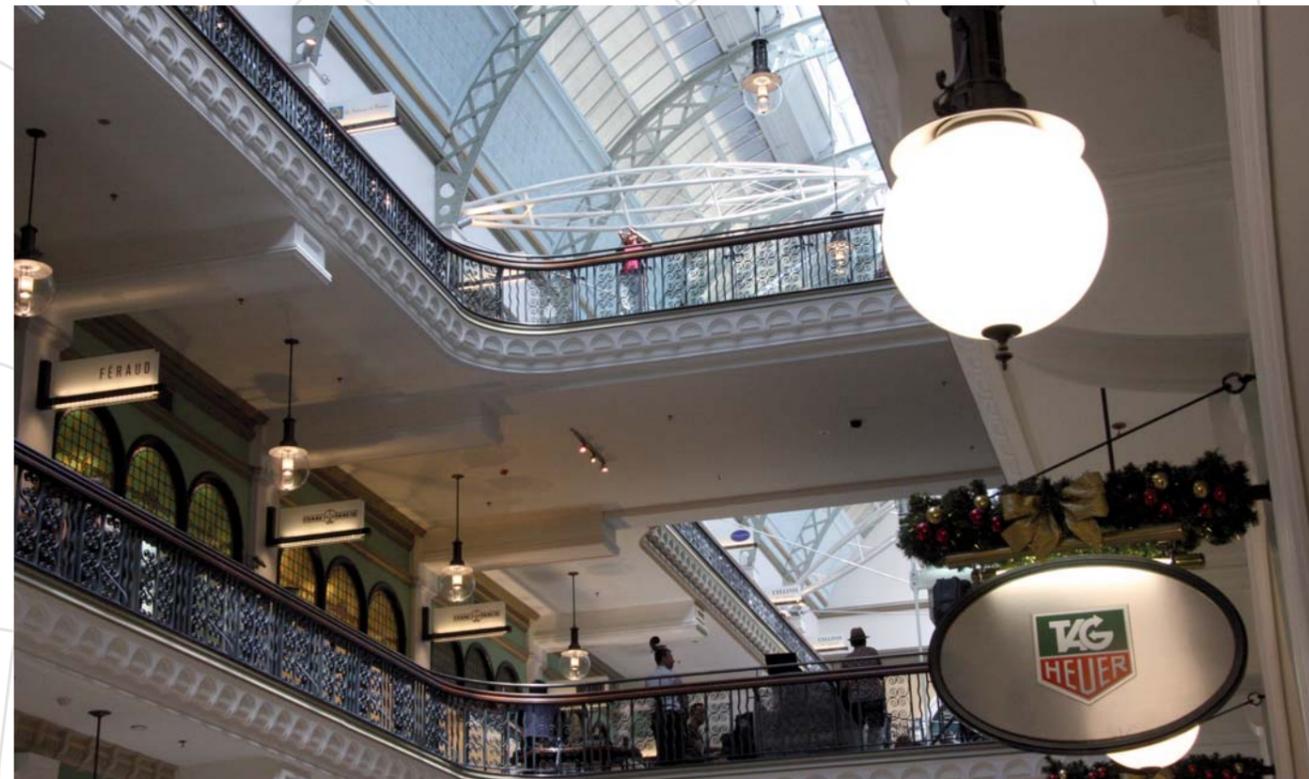
After a few discussions with Tim a few design idea solutions came to our mind and the next step was to make prototype #1. This meant the internal structure of the fitting had to be removed and replaced by all new parts which had to be designed and manufactured and combined with the use of existing stock standard components like downlight reflectors and die cast bayonet rings sets.

TECHNICAL DETAILS

We made a double reflector optic for 80% - 90% down ward and approx 10% upward lighting. Initial tests with this showed we were on the right track with this prototype, but a lot of fine tuning still had to be done. When Tim got the idea to add a gas lantern look to the brief the final solution fell into place.

Tim and I as campers used gas lanterns, so we knew what was needed for us to develop this concept idea to a working prototype#2.

We at 3S Lighting did developments from which we could use acquired knowledge for this challenging brief.



When developing our miniature 20 - 70W HIT downlighter we had to find that the HIT - TE lamps had an extra ordinary amount of Light spillage from the lamp envelope between the burner and the porcelain base.

To avoid excessive light spill into the ceiling void we developed quite simple but effective 50mm diameter tube Lamp shielding.

The light spill is so much that when capturing and directing this otherwise unused light, it even illuminates very effectively the opal diffusers of our subsequently developed Halo HIT downlighter range without a secondary light source.

Now what to do about the gas mantle burner and the glass cylinder for the gas lantern envelope?

We are using in some of our bollards Bora silicate glass cylinders which we sand blast in house to various degrees of satin finishes to make them more, or less translucent. Bora Silicate glass is highly heat resistant



OUTCOME AND SOLUTION

We used a smaller glass 50 x 40mm sandblasted Bora Silicate glass tube on top of the high specular convex faceted reflectors, same like the heat shields, capturing the spill light of the HIT lamp and transforming it into a point light source simulating a gas mantle, while for the outer cover we used a sand blasted 110 x 115mm glass as the gas lantern envelope.

The top cover holding the outer glass was slotted allowing some of the spill light to be directed upwards as well.

With all this zero light is lost for the downlighting component, and every lamp lumen was put to use. (Was made useful)

For better cut off angle and lamp shielding a front nozzle was developed.

The total number of component for the refurbishment of the QVB pendant is 32 excluding fixing materials like locknuts and screws etc.

Without Tim's ideas and visions for what the end product should look like and perform, this project would not have been completed. It was a pleasure to work with you Tim on this project.

Goetz Schraer

3S Lighting Pty Ltd.