**PRESS RELEASE**

Zutari assists FirstRand to achieve a 4 Green Star rating at 8 Merchant Place

**26 January 2022:** Identifying the need to improve the quality of its employees’ work-life balance, financial group FirstRand planned to achieve this by providing wellness and lifestyle facilities within the existing Merchant Place campus in Sandton, Johannesburg.

Leading consulting engineering and infrastructure advisory firm [Zutari](http://www.zutari.com) played a crucial role in bringing this three-storey building to fruition by providing civil, structural and wet services, in addition to environmentally sustainable design (ESD) consulting.

Known as 8 Merchant Place (8MP), the centre has achieved a 4 Star Green Star Design certification under the Public and Education Building scheme of the Green Building Council South Africa (GBCSA). “This is in line with the purpose the building serves, namely a wellness centre fitted with medical rooms, gym, educare centre, complementary retail and a rooftop entertainment area with a perimeter running track,” explains **Yovka Raytcheva-Schaap**, Associate, ESD Consulting & Project Management at Zutari.

The project is a showcase of the ‘one-stop shop’ solutions that Zutari prides itself on co-creating with its clients. “Having the civil, structural and wet services all provided internally by us allowed for efficient co-ordination between the disciplines and resolution of any clashes and issues before the construction information was issued,” highlights Zutari Technical Director **Mark Axelrod**.

Zutari’s structural scope of work encompassed the design and supervision of the new building, including strengthening the existing columns and underpinning the foundations, while the civil scope comprised the stormwater design. “From a structural perspective, the project was complicated by the geometry of the new floor slabs, strengthening the existing structure and interfacing with the existing services,” points out Axelrod.

Calculations revealed that the load-carrying capacity of the existing columns and foundations in the basement was insufficient to support the additional load from the new building. Zutari therefore developed strengthening details for the existing columns using reinforcement concrete collars. This had to be carried out with minimal interference to the functioning of the building and vehicle movement along Bute Lane and in the basements.

Existing services in the basements such as water tanks could not be moved, which posed additional challenges. For the foundations, the underpinning piles were installed eccentrically to avoid existing services. As a result, strap beams were introduced to resolve the eccentric loads. The existing ground slab had a pond and landscaping that had to be removed in order to construct the new elevated ground level.

This consisted of sleeper walls with a BONDEK® slab, which is a profile steel sheeting widely accepted by the building and construction industry for high efficiency and speed of construction. To ensure that the new load was less than that of the existing ground slab capacity, the existing no-fines concrete under the new building footprint was removed.

In terms of wet services, Zutari was appointed as consultant for the internal hot and cold-water reticulation, internal soil and waste drainage reticulation and central hot water generating plant installation, explains **Vincent Gieselbach,** the wet services engineer.

The design was carried out to meet both Green Star and SANS10400XA requirements. Efficient sanitary fittings were installed throughout the building. Hot water is provided by means of a central hot water system with a heat pump. Comprehensive water metering is installed and connected to the Building Management System (BMS) for optimal water-use management.

Enhanced indoor environment quality was achieved by means of increased ventilation rates, glare-control elements, optimised external views and connection to nature, thermally comfortable spaces and use of occupant-friendly materials and finishes. Dedicated exhaust risers within the tenancies ensure that air pollutants from printing machines, for example, are exhausted outwards.

The building’s optimal energy performance results from the selection of energy-efficient HVAC system and lighting, and the rigorous commissioning and finetuning of all services. Where individually enclosed spaces are unoccupied for a period, the BMS automatically switches off electricity-consuming services.

Given the location of the building in the wider Merchant Place campus, 8MP makes use of centralised existing services and facilities such as a standby generator farm, back-up chiller capacity and the wider-campus BMS and parking spaces, which would have had to be sourced independently for a conventional building.

“This arrangement makes the project unique from a reuse of equipment and facilities perspective, which certainly contributes to the improved overall environmental performance of the building,” highlights Raytcheva-Schaap.

Waste management was handled in a responsible way during construction of the building. An Operational Waste Management Plan was implemented by the project owner to ensure that, once the building was operational, waste generation is reduced and that a large percentage is diverted from landfill by means of recycling and/or reuse.

Lastly, 8MP incorporates safety features aimed at limiting the spread of Covid-19 infections and similar viruses. For example, the main entrance of the building, as well as all entrances to the different tenancies, feature touchless doorways.

The drawings for the existing building were all completed on CAD. However, due to the geometric complexities of the new building, 3D modelling was vital for the success of the project. Together with architect Boogertman + Partners, Zutari drove the BIM collaboration on the project, ensuring all services were coordinated on one federated model.

“The benefits of 3D modelling were transferred to the contractor, as initially it was challenging to visualise the complex slab geometry,” adds Axelrod. Zutari assisted Trencon to install Naviswork Freedom, as well as demonstrating how to operate the model.

Project completion was originally planned for 20 January 2021. However, due to Covid-19 restrictions, the site stopped all work for ten weeks from March 2019, and the project was finally completed on 16 July 2021.

“The ESD credentials of the building, as well as the implemented occupant health and well-being features, are a testament to FirstRand’s commitment to environmental sustainability and providing best-in-class support services to its employees,” concludes Raytcheva-Schaap.

**FirstRand 8 Merchant Place: Key Facts**

* Total project cost: R121 115 550 (excl. VAT)
* Gross lettable area (GLA): 3 800 m2
* Four storeys above ground
* Four Star Green Star rating (Public and Education Building)
* Ground floor: Restaurants, optometrist, hair salon, dentist, etc.
* First floor: Gym facilities
* Second floor: Baby day-care; Play school (1-3), Pre-school (3-5)
* Third floor: Running track, outdoor seating, kitchen
* Roof: Accessible for maintenance

**Professional team**

**Client / Developer**: ERIS

**Architect**: Boogertman + Partners

**Civil and structural, Wet services and Sustainability**: Zutari

**Mechanical Engineer**: Adaptive Resource Engineers

**Electrical Engineer**: Claassen Auret

**QS**: Vusela

**Project Manager**: Metrum

**Contractor**: Trencon

***Ends***

**Notes to the Editor**To download hi-res images for this release, please visit <http://media.ngage.co.za> and click the Zutari link to view the company’s press office.

**About Zutari**

As engineering consultants and trusted advisors, Zutari co-creates an engineered impact that enables environments, communities and economies to thrive. Few others can match our local capacity, long-standing presence and understanding of the challenges required to operate successfully across various regions in Africa.

We have created an impact across Africa for the past 90 years (1932 to 2022) and remain committed to this continent, making us the perfect partner to those less familiar with working in Africa. We are experienced in international projects and our Global Design Centres allow us to bring world-class solutions to our clients.

As a private management-owned company, our commitment is true, and we have vested interest in our clients’ success. Our strong relationships allow us to connect the right expertise, processes and resources to match client’s needs and bring stakeholders that have shared interests together.

We blend the old and the new. We have moved beyond traditional engineering and work collaboratively to integrate technical and creative thinking. This process of co-creation allows us to unearth new opportunities with our clients and partners.

Zutari’s broad collective of in-house, industry-recognised engineering consultants and trusted advisors provide seamless and integrated delivery. This unique ability to offer scaled engagement allows Zutari to solve complex challenges more efficiently.

Grounded in digital engineering, we continuously deliver better results.

**Zutari Contact**

Rashree Maharaj

PR and Media Advisor

Email: Rashree.Maharaj@zutari.com

Tel: (012) 427 2000

Web: <https://www.zutari.com>

**Media Contact**

Rachel Mekgwe

Account Executive

NGAGE Public Relations

Phone: (011) 867 7763

Fax: 086 512 3352

Cell: 074 212 1422

Email: rachel@ngage.co.za

Web: [www.ngage.co.za](http://www.ngage.co.za/)

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