



GREEN CONSULTANT IN UMHLANGA

Integrated infrastructure delivery company AECOM's experience in green building rating and sustainability stood it in good stead when it was appointed as green consultant for Pran Boulevard on Umhlanga Rocks Drive in the Ridgeside precinct, designed by architecture and interior architecture group Paragon.

Pran Boulevard consists of two separate office buildings of three levels each above ground floor, linked together on each level with enclosed glazed bridges. There are three parking levels providing about 250 parking bays, as well as a ground-floor podium level with timber decks, walkways, landscaping, and water features. The total building area, including the parking levels, is about 18 600 square metres.

Located in the rapidly-evolving business district of Umhlanga, Pran Boulevard used parametric modelling for its design, combined with a building envelope that responds to the site, views, and climate. Over 80% of the building has access to views. The structural system is concrete with a glazed cladding envelope.

A particular achievement of the project is that the two buildings achieve a 60% improvement in carbon emissions over the SANS 204 National Building standard. This is due to innovations such as a cooled-air HVAC system, combined with water-efficient measures such as efficient sanitary fixtures and water-wise landscaping, AECOM Sustainability Practice Area Lead Candice Manning highlights.

For example, paints, adhesives sealants, and carpets all have low VOC emissions. More than 70% of all building waste generated on-site is recycled or reused. An integrated Building Management System (BMS) system records and logs all energy and water usage within the building, which can be displayed in real-time for building-performance review.

A 4-star Green Star rating was the target from the outset, which the project received in May 2018. This was a particular achievement in that AECOM also had to adhere to the highly specific requirements of the Ridgeside Management Association (RMA) concerning the treatment of corner sites in the precinct, as set out in the RMA Design Guidelines Volume 0 & 1.

Situated on the corner of Umhlanga Rocks Drive and Ntusi Road, the site slopes away steeply from Umhlanga Rocks Drive towards the east. Combined with a maximum building-height restriction, the site posed a major challenge in terms of maximising the building height/office area, while also finding a median level to maximise pedestrian accessibility from the Umhlanga Rocks drive side, and vehicle access from Nokwe Avenue on the opposite side.

In addition to sustainability, AECOM also incorporates architecture, interior design, and masterplanning, with all of these disciplines collaborating in order to offer a streamlined service for clients. Itself a Silver founding member of the Green Building Council South Africa, AECOM can undertake building ratings such as Green Star Office, Green Star Interiors, Green Star Existing Building Performance, LEED Design and Construction, and LEED Interior Ratings.

From on-site practices to green initiatives in its own offices, AECOM is committed to implementing sustainability across the board. "We are committed to building our capabilities to provide sustainable solutions for our clients in creative and innovative ways. We aim to produce sustainable outcomes across every aspect of our work, including planning, design, development, production, delivery and review.

"Sustainability is also at the core of how we manage our company globally. We take our responsibilities seriously, and continue to deliver improvements in our environmental performance across key performance indicators, including greenhouse gas emissions, water, waste, energy, and preparedness for the impacts of climate change," Manning concludes. ■



AECOM Sustainability Practice Area Lead, Candice Manning.