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THE VILLA MALL

4 Star Green Star SA - Retail Design v1 Rating
Achieved in October 2010

PROJECT FLOOR AREAS

TOTAL GROSS FLOOR AREA (GFA):	129,056 m ²
TOTAL RETAIL (GFA):	129,056 m ²
TOTAL TENANT USABLE AREA (TUA):	83,259 m ²

INTRODUCTION

The VILLA MALL in Pretoria will provide retail space for over 300 tenants. Construction began in January 2009 and will reach practical completion at the end of August 2011.

From the outset of the project, the client had made their desire known to develop a green retail building.

In 2009 Capicol (Pty) Ltd and their design team began work on implementing environmental initiatives for a 4 Star Green Star SA – Retail Centre v1 Design rating.

In October 2010 the project became one of the first to achieve a rating under the Green Star SA – Retail Centre v1 rating tool, achieving a 4-star Design rating.

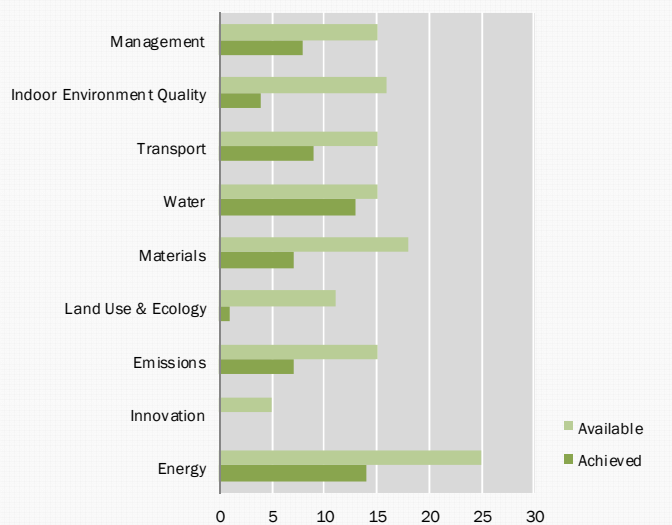


PROJECT ADDRESS

CORNER DE VILLEBOIS MAREUIL & DELMAS ROADS
MORELETA PARK
PRETORIA (EAST)
GAUTENG
SOUTH AFRICA

POINTS ALLOCATION

TOTAL POINTS: 51



PROJECT DESIGN INITIATIVES:

MANAGEMENT

- Monthly monitoring for one year after practical completion to tune the building systems and full re-commissioning 12 months after practical completion are proposed
- A Building User's Guide and a Tenant Fit Out Guide will be compiled for staff in close cooperation with design professionals
- A 'green lease' has been developed and the owner is committed to engaging this agreement with no less than 80% of the tenancies to participate in:
 - Electrical energy monitoring & reporting and the development of an energy management plan;
 - Water monitoring & reporting and the development of a water management plan;
 - Waste reduction/recycling monitoring & reporting and the development of a waste management plan;
 - Preparation of a procurement policy regarding the use of environmentally friendly consumables; and
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INDOOR ENVIRONMENT QUALITY

- High frequency lighting ballasts are to be installed throughout the project to reduce low frequency 'flicker'
- Noise levels are to be reduced in accordance with SANS 10103:2004
- Only composite wood products with low formaldehyde emissions levels (maximum E1) will be used

TRANSPORT

- Excessive car parking has been avoided with the number of parking spaces provided adhering to minimum local requirements, thus encouraging alternative modes of transportation
- 5% of the parking bays will be dedicated to motorbikes, mopeds and scooters, in preferred parking locations
- Bicycle storage, showers and lockers will be provided for 3% of the building staff and visitor bicycle parking will be provided
- Mass transport options for building occupants include minibus taxis and PUTCO buses

MATERIALS

- 30% of the cement used in the project will be replaced by industrial waste products, reducing the embodied energy of the concrete
- 60% of the steel reinforcing will have a recycled content of greater than 90%
- A 20% reduction in structural concrete will be achieved by having light weight façade and internal partitioning structures
- 20% of the total contract value will be represented by materials or products sourced within 400 km of the project site
- Total cost of PVC will be reduced by 30% through replacement with HDPE piping

WATER

- Efficient water fixtures and fittings will be installed to reduce water consumption
- A grey water system will collect greywater from the wash hand basins and showers for toilet flushing
- Rainwater will be harvested from a third of the total roof area and reused for irrigation and toilet flushing
- Water meters will be installed for all major water uses and connected to a Building Management System to support efficient water consumption management
- Potable water consumption for landscape irrigation will be reduced by up to 50%, through moisture sensor irrigation systems
- Landscape will be designed with water-wise plantings
- Fire protection system test and maintenance drain-down water will be reused for irrigation

LAND USE & ECOLOGY

- A large portion of the site was previously built on and the land reused
- The urban heat island effect is minimised with a combination of green roofs, photovoltaics and a roofing material with a high solar reflectance index.

ENERGY

- HVAC system proposed is comprised of an efficient Variable Refrigerant Volume heat pump system
- Provision is made for a large photovoltaics array on the roof of the shopping centre, with a proposed capacity of 2 MW.
- Lighting system designed to achieve an average 4.21 W/m²

EMISSIONS

- The proposed refrigerants and thermal insulants will have an Ozone Depleting Potential of zero
- Occupant amenity sewerage system outflow will be reduced through water efficient fittings and fixtures and a grey-water recycling system installation
- Gas boilers will have low NOx emissions ;
- Generators to comply with the Tier 3 emissions standards as defined by the United States Environmental Protection Agency (EPA).

PROJECT TEAM:

OWNER
CAPICOL (Pty) Ltd

ARCHITECTS
Osglo Architects PTA

ELECTRICAL ENGINEER
VSV Electrical Consultants

FIRE/MECHANICAL/LIFT
ENGINEER
SEBOKWA Consulting Engineers

MAIN CONTRACTOR
G.D Irons Construction (Pty) Ltd

TENANT COORDINATOR
Coffey Projects

QUANTITY SURVEYORS
McLachlan du ploy Gauteng
(Pty) / Batticlo Holdings (Pty)
Ltd

CIVIL/STRUCTURAL
ENGINEERS
Laubscher Engineers Africa

SUSTAINABLE BUILDING
CONSULTANT
WSP GREEN by DESIGN

WET SERVICES
WSP Group

TRAFFIC ENGINEERS
Techworld Consulting
Engineers

ACOUSTIC ENGINEERS
Pro Acoustic Consortium