BRACKEN NATURE RESERVE VISITOR EDUCATION CENTRE

2 Reservoir Street, Brackenfell South, Cape Town

5 Star Green Star – Public & Education Building Design v1

greenstar AFRICA South Africa

Public & Education Building Design v1
★★★★★
5 Star Rating
South African Excellence
CERTIFIED MAY 2023

GREEN BUILDING COUNCIL SOUTH AFRICA

The Bracken Visitor Education Centre is located in Brackenfell. The project will see the complete redevelopment of the site, whereby the old historic buildings in the reserve will be restored and a community multi-purpose venue; admin block; garage & workshop will be constructed.

The structural design is an industrial type steel portal frame with steel purlins. Brick infill walls on strip footings with surface beds. The façade is a combination of face brick & plaster.

Sustainable building features include:

- Bracken Nature Reserve Visitor Education Centre aims to reduce energy consumption through a variety of different initiatives:
  - Lighting that uses a motion sensor controlled system and LED efficient fittings.
  - The building is designed to take advantage of natural daylight with high performance internal vision glazing.
  - Mechanically assisted Fresh Air ventilation systems will filter fresh air to enclosed offices and multi-purpose venue, using weather louvre's and occupancy sensors.
  - 50kWp Photovoltic Grid-tied system with Two 25kVA inverters.
  - 3kW backup element for 200l solar geyser.
- Several water efficient strategies have been employed to reduce potable water usage:
  - Rain water harvesting.
  - Black water treatment system.
  - Water efficient fittings are fitted onto all taps; waterless urinals are installed & toilets are flushed using recycled water from the Black water harvesting system.
  - Landscaped irrigation is not required. The local weatherwise indigenous ground cover, plant and tree species will be watered during the winter months natural rainfall.
- All occupants and visitors have access to water and energy consumption data by means of display screens. This offers insight into the sustainable operations of the building.
- Indoor environmental strategies have been implemented to enhance the wellbeing of the building occupants and create a better and healthier work environment. It covers aspects such as air quality & indoor pollutants; thermal comfort; adequate lighting and glare control; access to daylight and views.
- The building is designed to encourage alternative modes of transport in order to reduce greenhouse gas emissions and create a healthier lifestyle. Preferential parking bays have been allocated for fuel efficient transportation and secure bicycle storage. Cyclist facilities including showers & lockers.
- The building has waste recycling storage facilities for sorting and collecting of operational waste.

TOTAL POINTS:

64

CATEGORY SCORES:

PROJECT TEAM:

OWNER
City of Cape Town – Bracken Nature Reserve

ACCREDITED PROFFESSIONAL
Richard Duckitt & Justine Powrie

ARCHITECT
GAPP Architects and Urban Designers

ELECTRICAL ENGINEER
Claassen Auret (Pty) Ltd

FIRE ENGINEER
ConsultMech Mechanical Engineers

MECHANICAL ENGINEER
ConsultMech Mechanical Engineers

QUANTITY SURVEYORS
Senekal Allen & Partners

STRUCTURAL ENGINEERS
HHO Consulting Engineers

SUSTAINABLE DESIGN REVIEW
Goal Zero Consulting (Pty) Ltd

SUSTAINABLE BUILDING CONSULTANT
Goal Zero Consulting (Pty) Ltd

WET SERVICES
Sutherland Engineers

PROJECT MANAGER
GAPP Architects and Urban Designers

FLOOR AREAS:

TOTAL GROSS FLOOR AREA (GFA):	710m^2
TOTAL COMMERCIAL OFFICE AREA:	n/a
CAR PARKING AREA:	n/a