

GCIS / TSHEDIMOSETSO HOUSE

Hatfield, Pretoria, South Africa

(Green Building: First use of power generating glass in Africa)

PROJECT TYPE: Government agency green building

CLIENT:

Growthpoint Properties

PROJECT DURATION:

11 months

PROJECT DESCRIPTION:

Construct a 6 story office block to 4 Star Green Building SA Office v1 rating and incorporate innovative power generating glass. The end user would become the GCIS (Government Communication and Information Systems Agency).

CONTROLS:

Close management of the construction phase using Green Star v1 As-built Rating with client consultants. The following attributes were significant addressed:

- Buildings external skin was a combination of high performance glazing with PV panels incorporated on East, North and West Facades.
- Two innovative initiatives were focussed on:
 - Façade Solar Research Project (partnership with the University of Johannesburg and University of Edith Cowan (Australia) with the building owner and;
 - The use of Tropicglass (a PV-based window.)
- Large internal courtyard and rooftop balconies allow in natural light and ventilation.
- Air conditioned spaces were zoned and controlled with occupation sensors.
- Efficient light fittings and fixtures resulting in significant energy savings.
- Water efficient fittings and fixtures, dual flush toilets and waterless urinals installed resulting in significant water savings. 36 000 litre water collection tank for rainwater harvesting for the use in toilet flushing.
- Landscape design included: Moisture sensors, indigenous plant species, irrigation at night, use of mulch and water retention additives.
- Indoor air quality enhanced by external views and ventilated with fresh air rates of 100%, selected carpets and paints with low volatile organic compounds.

The project was awarded a 4-Star Green Star – Office v1 rating by the Green Building Council of South Africa.

