

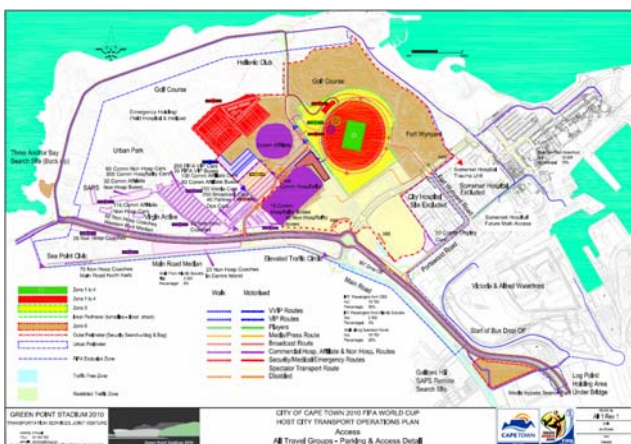
Client: BKS Group South Africa

# Pedestrian Flow Simulation around the Green Point Stadium

## Microscopic simulation of pedestrians entering and leaving the stadium - Performance analysis of the shuttle bus services

The South African engineering group BKS is in charge of planning four stadiums specifically built for the Soccer World Cup in 2010. The Green Point stadium, which is currently being built to host matches during the 2010 Fifa World Cup, will contain 68,000 seats. The stadium is set to host one semi-final match.

PTV's team of transportation consultants supports BKS. For example, microscopic simulation is used to optimise pedestrian flows within and around the stadium area.



General Transport and Operations Plan

### Tasks

Pedestrians entering the stadium: Optimising the pedestrian pathways between the parking areas and the stadium. Interaction between pedestrian and vehicle flows. Analysing the capacity of security and access control systems. Identifying bottlenecks.

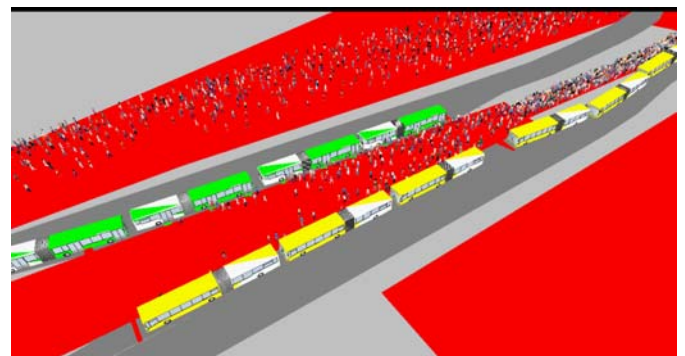
**Client:** BKS South Africa

**Objective:** Optimising pedestrian flows within and around Cape Town's Green Point Stadium during the World Cup 2010

Pedestrians leaving the stadium: Optimising pedestrian pathways from the stadium to the bus station. Optimising the traffic flow within the bus station area. Interaction between different transport modes. Performance analysis of the shuttle bus system. Identifying bottlenecks within the pedestrian network.

### Methodology

Creating a microscopic simulation model that visualises the partial pedestrian flows that overlap within and around the Green Point Stadium. Simulation analysis in terms of travel times and pedestrian density. Making simulation videos to visualise the process of entering and leaving the stadium



Simulation with VISSIM

### Results

- ▶ Evaluating the traffic flow according to quality standards
- ▶ Identifying and optimising bottlenecks within the pedestrian network
- ▶ Putting forward recommendations for the improvement of the shuttle bus system
- ▶ Analysing the capacity of security and access control systems