



# Redevelopment of Birsa Munda Stadium and Construction of Multi Level Car Parking Building at Rourkela



<b>Location Site</b>	: Rourkela, Odisha
<b>Area Built up</b>	: 48,139 sqm.
<b>Area</b>	: 21,501 sqm.
<b>Typology</b>	: Commercial
<b>Rating Category</b>	: GRIHA Provisional Rating
<b>Version</b>	: Version 2015
<b>Year of Award</b>	: 2025
<b>Client</b>	: Rourkela Smart City Limited
<b>GreenBuilding Consultant</b>	: Sustainable Buildings & Habitat, Bhubaneswar

The following strategies were adopted by the project team to reduce the building impact on the environment:

#### **Sustainable Site Planning:**

- Availability of amenities such as a ATM, police station, petrol pump, bus stand and restaurant is within a 500-meter walking distance from the main entrance of the project.
- 69.56% of the hard paved areas have been treated using a combination of strategies of with installation of solar panels at the terrace area, shading of hard paved surfaces by trees and soft paving.

#### **Energy:**

- EPI reduction of 66.57% from the GRIHA base case has been demonstrated through the integration of high-performance systems.
- Solar photovoltaics system of capacity 10 kWp has been installed.

#### **Occupant Comfort:**

- 50.74% of the regularly occupied spaces are day-lit and meet the daylight factor as prescribed by NBC 2005.

#### **Water Management:**

- Reduction of 39.11% from the GRIHA base case has been demonstrated in the building water demand by installing efficient low-flow fixtures.
- Reduction of 58.27% from the GRIHA base case has been demonstrated in the landscaped water demand by installing efficient irrigation systems.

#### **Sustainable Building Materials:**

- Pozzolana Portland cement with more than 25% fly ash content were used in plaster and masonry mortar.
- AAC blocks with more than 70% fly ash have been used for walling in the project.

#### **Waste Management:**

- Centralized waste collection facility has been provided in the project.
- Multi-colored bins have been provided for segregation of different types of waste.