



Pawan Hans Heliport Passenger Terminal and Utility Building

Location	: Rohini, New Delhi
Site Area	: 11407 m ²
Built up Area	: 3403.21 m ²
Air-conditioned Area	: 1871 m ²
Non Air-conditioned Area	: 449 m ²
Energy Performance Index (EPI)	: 84.43 kWh/m ² /annum
Renewable Energy	: 5 kWp Solar PV installation
GRIHA provisional rating	: 4 Stars
Year of Completion	: 2017

The following strategies were adopted to reduce the building impact on the natural environment:

☛ Sustainable Site Planning:

- Storm water management is planned to reduce peak run-off quantity.
- Air pollution control measures such as site barricading, coverage of dusty material, wheel washing and water sprinkling were implemented during construction to contain pollution.

☛ Water management:

- Reduction of 54.86% from the GRIHA base case has been demonstrated in building water demand by installing water efficient flush and flow fixtures.
- Construction water requirement was minimized to large extent by adopting curing and ponding techniques, using RMC and curing compounds.

☛ Energy Optimization:

- For achieving visual comfort:
 - » WWR of 34.23% was achieved in the building with a good visual connection between the occupants and the outside environment.
 - » 77.50% of total living space is day-lit and meets the daylight factors as prescribed by the National Building Code of India.
- For achieving thermal comfort:
 - » The project achieved 100% thermal comfort for the total analysis hours with the help of 2 air cooled chillers of 75 TR capacity and 3.58 COP.
 - » The Energy Performance Index of the project has been reduced by 62.47% below the GRIHA base case through envelope optimization, and integrating high performance systems.

☛ Renewable energy technologies integration:

- 5 kWp solar photovoltaic (PV) plant has been installed to reduce the dependence on fossil fuels.
- The project is generating sufficient electricity to offset 11.51% of conventional energy used for internal lighting consumption.

☛ Solid waste management:

- Multi-coloured bins have been provided on each floor level to collect and segregate waste at source.
- A dedicated space has been provided on site to store segregated waste from the entire building prior to disposal.

☛ Sustainable building materials:

- 65% and 28% of cement is replaced with fly ash by volume in fly ash bricks and by weight in plaster/masonry work respectively.
- Fly ash bricks have been used for wall construction.
- Materials such as flush doors, aluminum window frames and vitrified tiles with recycled content have been used in interiors, all of which have low carbon footprint.
- Indoor air quality has been maintained by using low-VOC paints, adhesives and sealants in 100% interior finishes.

Integrated Design Team:

Client	: Pawan Hans Heliport Ltd.
Project Coordinator	: Dineshchandra R Agrawal Infracon Private Limited
Principal Architect	: Designicon Architects
Green Building Design and Certification	: dbHMS Pvt. Ltd.