

GSAS HEALTHCARE HEALTHCARE CENTERS - 3 STARS Ashghal



Crafting a Green Legacy

Designed to achieve
Improved Indoor Environment

Designed to achieve
Reduced Water Consumption

Designed to achieve
50% Lower Water Consumption

Designed to achieve
30% Energy Reduction



قطر تستحق الأفضل
Qatar Deserves The Best





Introduction

GSAS (Global Sustainability Assessment System) Healthcare is aimed at supporting the implementation of sustainability and green building criteria in a variety of establishments that include healthcare facilities such as clinics, hospitals and accident and emergency medical services.

A recent study highlighted that the environment and the design quality of a building has an impact on patients' comfort and health, as well as directly effecting the performance of both medical staff and management.

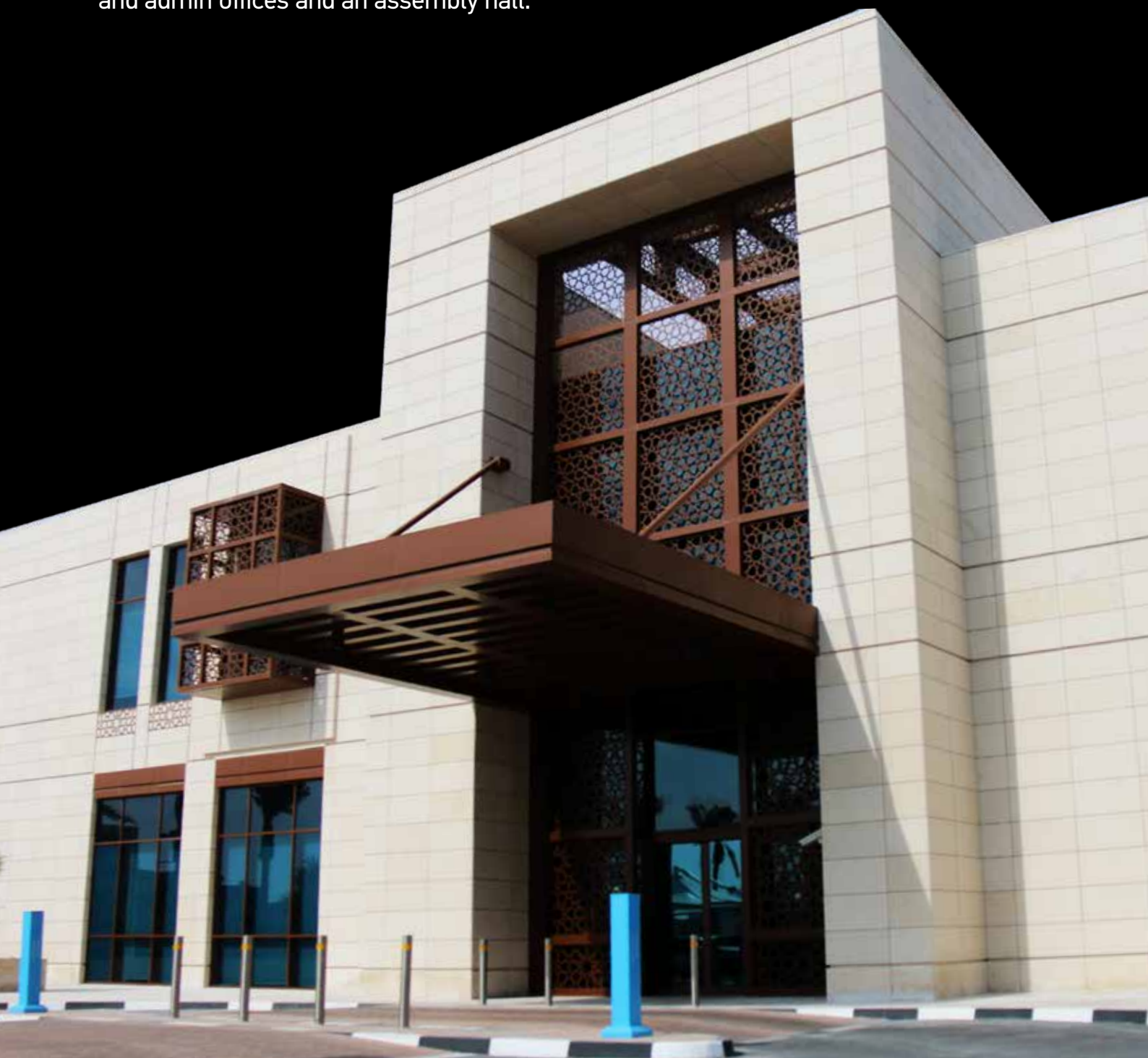
Healthcare facilities serve various functions including examination rooms, treatment rooms, admin offices, X-ray and ultrasound diagnostics, pharmacy, sauna, steam and massage rooms, and a lap swimming pool.

The building includes a passage and a car park with all the safety requirements, which also facilitates the circulation of vehicles and buses.

Projects Highlights

In accordance with the highest sustainability practices, all Ashghal healthcare centers in Qatar were designed and built to achieve a minimum of **GSAS 3 STARS** Rating.

The healthcare center is a two-story building serving multiple functions such as examination and treatment rooms, dental clinic, multipurpose hall, kitchen, cafeteria and admin offices and an assembly hall.



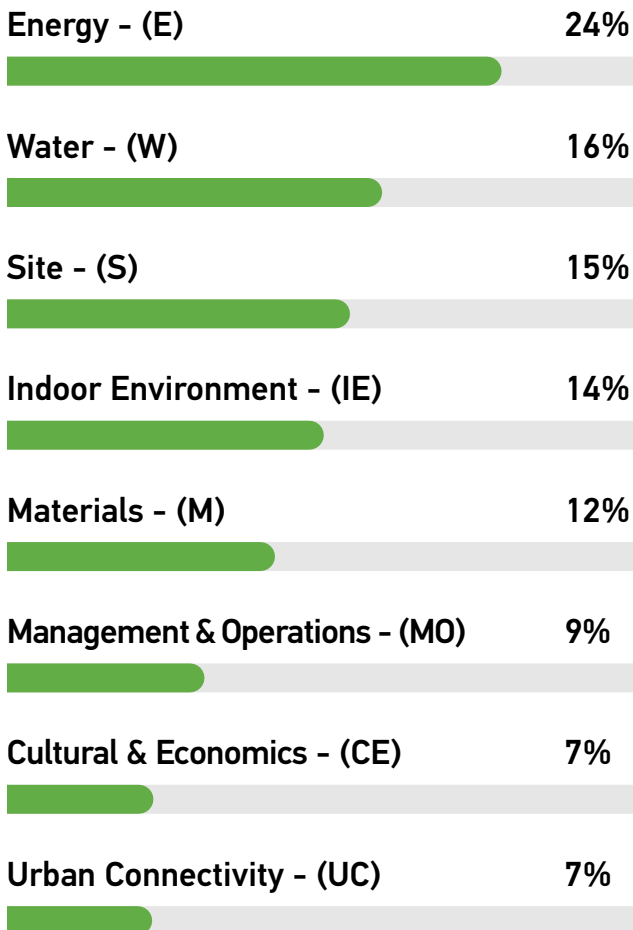


GSAS

Healthcare

Typology

GSAS Healthcare typology consists of eight categories with their associated weights as per the following chart. These categories feature more than 50 criteria covering all the sustainability requirements in this type of establishment.



Ashghal Approach to Sustainable Design

Design professionals of different engineering disciplines join efforts to develop establishments that can achieve a mix of environmental, economic, and social objectives. The process shall positively achieve high performance healthcare centers that are fundamentally different from conventional practice. To ensure effectiveness, this process requires a significant commitment and professionalism and shall:

- Meet energy and environmental performance criteria and minimize the negative impact of construction work.
- Compel with the design directives to avoid depletion of natural and exhaustible resources.
- Encourage recycling, reduce waste and optimize resource use.
- Incorporate interdisciplinary collaboration throughout the design and construction process.
- Document high performance materials and techniques in the building to perform maintenance and repair in accordance with the original design intent.
- Optimize design options through simulations, models, and other design tools.
- Integrate all significant building design decisions and strategies.
- Maximize performance by maintaining high standards of air quality and increasing the use of daylighting.

Environmental benefits

by conserving precious resources such as water and energy.

Economic benefits

by reducing operating and maintenance costs.

Social benefits

by improving patients and staff satisfaction.

Energy

Designed to reduce energy consumption by 30% compared to existing healthcare centers to combat climate change and reduce air pollution through:

- **Implementation of passive design strategies responding to local climate conditions through:**
 - ▶ Optimizing wall to window ratio.
 - ▶ Using high performing insulation materials for roof, windows and facade.
 - ▶ External shading devices to reduce heat gains.
- **Selections of efficient building systems:**
 - ▶ Installing energy efficient HVAC system with high SEER and heat recovery module.
 - ▶ Designing lighting layout and levels according to the best industry practices in energy efficiency.



Site

Chosen to mitigate environmental impact through:

- Designing the landscaping in a way which prevents desertification.
- Preventing rainwater runoff through on-site collection methods.
- Developing well-marked and accessible pathways.



Urban Connectivity

Designed to reduce traffic congestion, pollution, and waste/sewage infrastructure.

- Choosing the development site in proximity to the existing infrastructure having a minimum impact on the local traffic load.
- Choosing the development site in proximity to existing amenities.
- Building massing with minimal overshadowing of adjoining sites.



Materials

Chosen to mitigate environmental impact due to material through:

- Supporting the national economy by utilizing construction expenditure benefiting national economy.
- Using regional and local materials in order to reduce transportation needs, and to support the national economy.
- Using practically-designed materials that can be easily recycled and reproduced .



Indoor Environment

Designed to improve indoor environment for human comfort and health through:

- Efficient HVAC systems to maintain indoor air quality and ventilation standards according to best practices and regulations.
- Optimizing exposure of daylight for interior spaces to allow occupants enjoy the external views and reduce artificial lighting.
- Facilitating natural ventilation by providing operable windows in conjunction with mechanically ventilated systems.
- Ensuring adequate illuminance levels for visual performance and comfort.
- Providing all potential contamination areas like chemistry labs with sufficient ventilation and exhausts to outdoors.
- Using self-closing doors and deck to deck partitions for containing indoor chemical and pollutants sources.



Water

Designed to reduce water consumption of occupants through:

- Efficient water saving fixtures.
- Economic dual flush toilets.
- Using Drip irrigation system for soft landscaped areas to minimize water consumption and wastage.



Management & Operation

Managed and operated in a way to mitigate environmental impacts through:

- Providing an automated building control system to optimize building performance.
- Smart Waiting list Management: automated registration and waiting to enhance patients' service and comfort.



Cultural Identity

Designed to enhance, strengthen and reflect the cultural identity and traditions of Qatar through the use of traditional architectural expressions in the building façade and surroundings.

Façades and all architectural elements are carefully designed and consciously selected to provide presentable finishes to both interior and exterior.

