

Rating & Certification Tool: Estidama & the Pearl Rating System

www.estidama.org/pearl-rating-system-v10.aspx

Summary

Estidama means 'sustainability' in Arabic. It is a general sustainability initiative associated with the Abu Dhabi Urban Planning Council. The Pearl Rating System rates built environment performance against economic, environmental, cultural and social aspects.

Certifying body: Abu Dhabi Urban Planning Council

Applicable sectors					Award types				
General civil	Transport only	Buildings	Public realm	Community / precinct	Design	As built	Operation	Planning	Other

Country	Abu Dhabi	Sustainability criteria	<p>The tools consist of seven assessment categories (brackets include: max. points for: buildings, communities, villas): 1. Integrated development process (13,10, 10) 2. Natural systems (12,14, 5) 3. Liveable buildings (37*,38, 15) 4. Precious water (43**,37, 21) 5. Resourceful energy (44,42, 21) 6. Stewarding materials (28,18, 18) 7. Innovating practice (3,3,3)</p> <p>*maximum 36 for offices and 30 for retail. ** maximum 45 for schools.</p> <p>Total points: buildings - 177, communities - 159, villas - 90 (excludes Innovating Practice credits points, which are offered as a bonus).</p>
Deployment & developments	<p>First launched in 2010. There are currently three rating systems: Pearl Community Rating System, Pearl Building Rating System, Pearl Villa Rating System. To date, 592 buildings and 10,719 villas have been rated. Only one building has achieved a 5 Pearl Rating.</p> <p>Certifications expire when subsequent stages are reached. However, currently the operational rating is under development, so the construction rating is valid for a building's lifetime.</p>		
Applicants	Required for new developments in the Emirates. It is therefore relevant to developers, design consultants, contractors and suppliers.	Assessment: scoring, performance levels, evidence collection	<p>There are five levels of award. They all require achievement of all mandatory credits. The award level depends on the optional credits, each associated with a credit point (credit point requirement provided in brackets): 5 Pearl (>=140 points), 4 Pearl (≥115 points), 3 Pearl (≥85 points), 2 Pearl (≥60 points), 1 Pearl (no optional credit points necessary).</p> <p>Maximum credit points available in each category varies. There is a total of 177 available points (although this varies slightly for different building types). Liveable buildings, Precious water and Resourceful energy are the most heavily weighted categories.</p> <p>Evidence is submitted via an electronic file structure, the template is provided through Estidama website. Typical evidence includes drawings, calculations, reports and extracts from specifications. In addition, construction audits provide applicant assistance and evidence is required for most construction phase credits.</p> <p>The time taken to collect evidence depends on targeted certification level and project size.</p>
Government endorsement	<p>This system was a government initiative. Currently (as of 2010), all new development applications for communities are mandated to satisfy all required credits to achieve a minimum 1 Pearl level of compliance. All new privately initiated applications for new buildings are required to achieve a minimum of 1 Pearl compliance. Government-led projects (including schools, mosques and government buildings) are required to achieve a minimum of 2 Pearls. Also, new villas are required to achieve a minimum 1 Pearl compliance.</p>		
Support to applicants	<p>Where calculators are referred to in the requirements, they are provided through the Estidama website (energy, water and waste). Guidance on calculation and methodology and references to standards/guidelines are also provided for credits, where applicable. Other features include: submittal and consultant guides; an online product database; an excel scorecard to track progress; unlimited submittal review and support - free for Pearl Qualified Professionals; alternative compliance paths - available for non-typical / exemplar projects.</p>	Tailoring	Not all credits are relevant for all typologies and some typologies have specific requirements.
		Fee	The certification body (UPC) does not charge a fee for the assessment and certification of Estidama projects. All training and project specific questions are also provided free of charge.

Case study

Project name: Imperial College London Diabetes Centre

Location: Al Safarat, Abu Dhabi

Applicants / proponent: Imperial College London

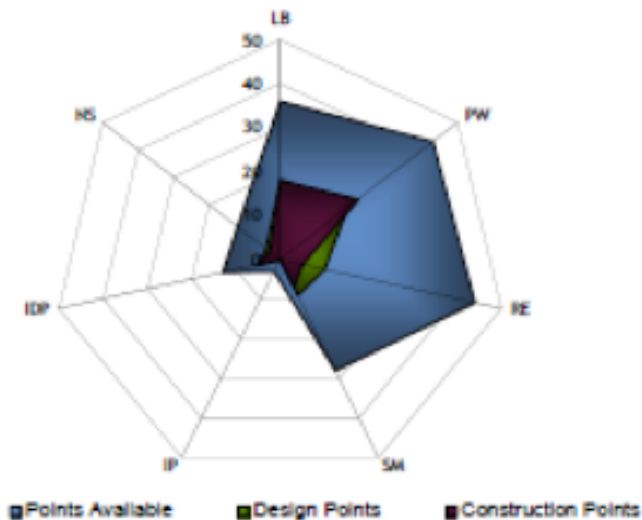
Award: 2 Pearl, Building, 2011

Brief project description:

Estidama was not originally targeted in design as it was not mandated at the time. The project had included sustainable features that satisfied aims of an Estidama building including:

- Located on brownfield land near existing public transport routes
- Travel plan to encourage use of public transportation
- Cycle parking and showers provided for staff
- Native/adaptive planting
- Improved outdoor thermal comfort/shading
- Low VOC emission and non-polluting materials used
- Improved occupant thermal comfort controls
- Each end use sub-metered for improved energy monitoring and reporting
- Improved building envelope and MEP system efficiency for reduced energy consumption
- Energy efficient appliances
- Low water usage fixtures and Solar hot water generation
- Improved construction (81% achieved) and operation waste

Estidama ensured sustainability features in design stage were incorporated into construction and that the building could demonstrate improved environmental performance to the client and end users. The building is currently being monitored to gather empirical data to measure programme effectiveness.



Above: Summary performance of the diabetes centre using the Pearl Rating assessment

Above right: External view of the diabetes centre

Right: Inside the diabetes centre