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# RODAS – AN ECOTEL HOTEL INSPIRING SUSTAINABILITY

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## Ingraining Sustainability

The Rodas Hotel was re-awarded the ECOTEL Certification for meeting its criteria and making sustainability integral to the company’s business strategy. This article focuses on the strategies used by the Hotel in ingraining sustainability through its operations.

### About the Hotel

Rodas, a three-star boutique hotel with 36 rooms, is located in the heart of Powai in North Mumbai. The hotel opened in 2001 when the sustainability movement in hospitality had just started. Its neoclassical arched façade was at the forefront of ‘green architecture’ as it formed an efficient building envelope through a dual layer of external arches and columns and internal walls and thermally insulated windows. With its orientation towards northeast, the hotel captures maximum daylight hours through its bank of windows saving on lighting costs during the day while facilitating thermal insulation (U-value of glass is 2.8 W/m<sup>2</sup>K).

### Energy Management System

Not only does electricity production from burning of fossil fuels lead to greenhouse gas emissions and global warming but economically, too, it consumes large resources, which could be conserved. The Rodas saved ₹ 1,142,621 in 2014/15 through its energy saving strategy (Figure 1).

FIGURE 1: STRATEGY FOR ENERGY CONSERVATION

Energy Saving Design/ Device	Energy Saving (KWh/ Day)	Energy Saving (KWh/ year)	Energy Savings (₹/ year)
<b>Daylight used</b> and not artificial lighting due to building orientation and shape	6.81	2,487	20,668
<b>Lighting Control</b> by electronic dimmers in Lobby and restaurants to vary brightness	6.68	2,439	20,271
<b>Waste energy captured</b> by passing chilled water line used for drinking water next to AC cooling pipe instead of installing individual coolers	51.96	18,965	157,602
<b>Energy efficient</b> LED Lights/ PL Tubes/ T5 tubes used in Guest rooms and Public Areas	80.98	29,558	245,624
<b>Waste heat recovered</b> from AC plant and transferred through desuper heater enabling savings in heating water	230.27	84,050	698,456
<b>TOTAL</b>	376.71	137,500	1,142,621

Additional best practices are summarised below:

FIGURE 2: RODAS HOTEL



- **Sub-metering** for understanding the energy consumption patterns.
- **Energy management with Power Factor** close to unity is maintained.
- **Demand based air-conditioning** in public areas like banquets and restaurants ensured by installation of Air Quality Sensors linked to Modulating Fresh Air Dampers.
- **Variable speed devices (VSDs)** on motors for pumping water vertically.
- **Energy efficient** equipment used in Food and Beverage, and Engineering.
- **Maintenance** forms a key feature of energy reduction with a rigorous schedule of cleaning coils and filters, calibrating controls, lubricating and adjusting equipment among others.

- **Occupancy Sensors** in public toilets that turn off lights when there in no occupancy.

- **Duct leakage** has been reduced by maintenance and appropriate insulation of ducts.

### Water Conservation

With population growth, urbanisation, and ever increasing demand on the finite amount of water, there is increased pressure on freshwater resources exacerbated by pollution and wasteful consumption patterns. Moreover, economic scarcity – limited access to clean water (inspite of physical resources) due to financial, institutional or human constraints – exists in many areas of the world. However, because it is usually a free or low-paid resource in India, it does not form a priority for conservation. At the Rodas, water is sourced from the municipality, tankers and from sources like rainwater harvesting and treated grey water. Since sustainability is the core business philosophy, strategies for water conservation include:

- **Metering** of water entering the hotel on a daily basis along with sub-metering to understand its consumption pattern in various areas.
- **Adoption of water efficient infrastructure** that achieves flow rates close to those recommended by the Water Sense Programme. These include: (i) low-flow fixtures or aerators on showerheads and taps; (ii) sensors in public toilets; and (iii) dual toilets with high and low water settings.
- **Operational best practices** in Housekeeping and

### Waste Management

The concept of waste is not present in nature as dead/decaying matter is processed by microbes in the soil to food for the next cycle. The ‘zero waste’ concept followed for waste management aims to emulate natural cycles by processing waste of one cycle into resource for another. This not only reduces the landfill waste but also the landfill gas that they produce. Landfill gas – a noxious mixture of carbon dioxide and methane – adds to global warming.

The strategy for waste management followed at the Rodas is the 3-R concept of reduce, reuse and recycle (Figure 4).

**Reduce / Reuse:** The hotel did an analysis of all the things that could be reduced at source, which culminated in a savings of almost ₹ 2,000,000 for 2014/15. This includes revenues of almost ₹ 90,000 earned from selling waste. Measures comprise:

- **Plastic** reduction through reuse of key cards in the Front Office; recycling of unused housekeeping amenities by Housekeeping; delivery by suppliers in biodegradable bags in accordance with Purchasing norms of the Hotel; and installation of soap dispensers in public areas amongst other methods.
- **Paper** reduction by maximum online use across departments e.g. reservations, training records,

FIGURE 3: DEPARTMENTAL BEST PRACTICES FOR WATER CONSERVATION

Methods for Saving Water	Department	Financial Impact (₹) for 2014/15
Linen and Towel reuse programme in the rooms	Housekeeping	37,364
Salads are not served chilled on ice but cooled in the refrigerator, reducing ice and thereby water consumption	F&B	98,550
Cleaning kitchen floors with a bucket and mug, and not pipe	F&B	88,284
Table mats reused in Parabola restaurant	F&B	159,280
<b>TOTAL</b>		<b>383,478</b>

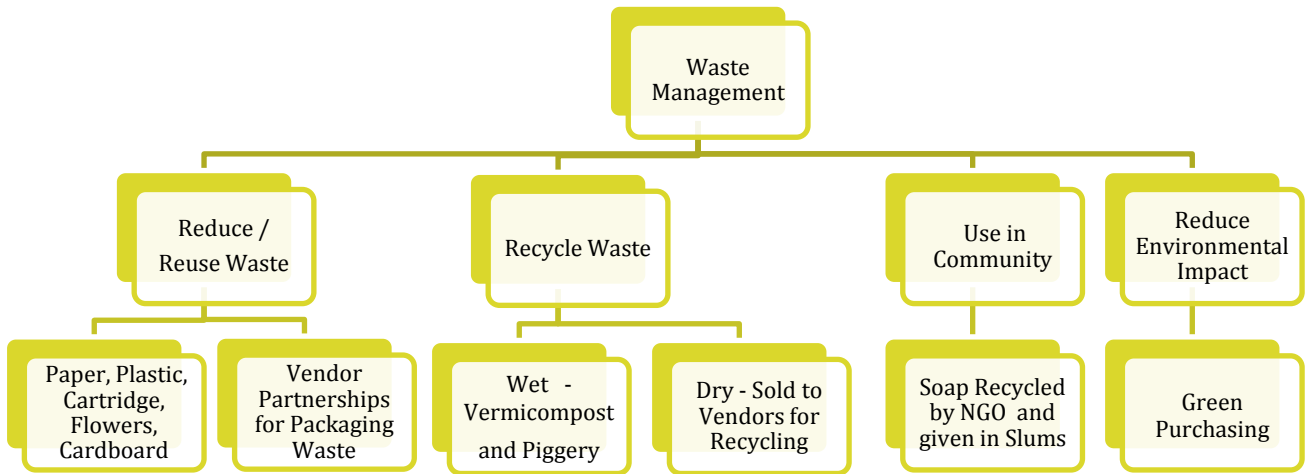
F&B that result in cost savings, quantified and presented in Figure 3.

- Augmentation of water supply by (i) **using treated wastewater** from a sewage treatment plant (STP) to which the entire wastewater in the hotel and other buildings in the complex (where the hotel is located) is sent for plumbing partially and washing of back areas; and (ii) capturing excess rain water during the monsoons falling on all surfaces by **rainwater harvesting**.

internal communications, provision of newspapers on guest request, whiteboard use for display of menu in kitchen, e-mailing of guest certificates for awarding guests who consumed less energy during their stay.

- **Fresh flowers** reduction through use of potted plants that are grown within the hotel instead of cut flowers that are typically purchased and thrown after use.

FIGURE 4: STRATEGIES FOR WASTE MANAGEMENT



- **Packaging waste** reduction by vendor partnerships, which are arrangements that allow the hotel to return the packaging waste to the vendor.

**Recycle:** Wet waste is sent to a piggery as well as vermicomposted. Discarded linen and towels are recycled by Housekeeping into wiping cloths and dusters. Some broken glass from crockery etc. has been recycled into platters and tables by reconstruction on the site.

**Community partnerships:** Last year, the Hotel tied up with Sundara, an NGO, to reprocess and recycle used soaps from the hotel. The soaps are then distributed in the slums of Mumbai to improve the hygiene needs of the underprivileged.

**Reduction in environmental impact of waste:** Through green purchasing, the environmental impact of waste is reduced. This is an on-going process and due diligence is paid during purchasing to environmentally-friendly products. Some practices include: (i) using 50% recycled post consumer content (pcc) paper for guest stationery and envelopes from Meerseen-Paper; (ii) using 80 GSM TNPL paper, which has 75% pcc as stationery material for office work; (iii) giving preference to earth-friendly supplies like Herbal amenities in guestrooms, biodegradable chemicals from Buzil Rossari for use by Housekeeping and Kitchen Stewarding, and Organic grains from Saatvik; and (iv) using biodegradable bin liners.

### Ingraining Sustainability into the Hotel Fibre

The hotel’s **mission** of commitment towards exceeding guest expectations and dedication to conserving the environment pervades the philosophy of the hotel.

**Training:** The training programme is very strong in the Hotel and since its inception reinforces the concept of sustainability. It meaningfully engages employees focussing on creating awareness by explaining the need, vision, mission, strategies and benefits for achieving sustainability so that the whole process is internalised. There is considerable employee engagement through posters, quizzes, training amongst other measures. Regular competitions like ‘Wealth from Waste’ are organised to increase sensitivity and environmental awareness.

FIGURE 5: MISSION FORMS THE DRIVING PHILOSOPHY



**Green Teams:** Green teams are traditionally defined as groups of staff and executive members from an office, department or organisational unit who meet regularly to educate themselves and their colleagues about sustainability, examine the sustainability of office practices, and create innovative solutions. The Green Team at Rodas is rich in diversity being represented by all departments. It is enthusiastic and regularly conducts activities that increase awareness about the environment as described below.

heritage to communicate the idea with larger audiences. During Ganesh Chaturthi, the festival to honour Lord Ganesh's birth anniversary, idols are immersed in water bodies resulting in enormous waste due to the ostentatious grandeur associated with the festival. Each year, the Green Team cleans up the promenade near Powai Lake (near which the hotel is located), brings the floral offerings and waste to the hotel for sorting, segregation, composting, and recycling.

FIGURE 6: WASTE SOAP FROM THE HOTEL RECYCLED BY SUNDARA, AN NGO, AND DISTRIBUTED IN THE COMMUNITY



The Green Team also polices the activities of the various departments to ensure traction with sustainability objectives of the Hotel like reduction in energy and water consumption as well as generation of landfill waste. Led by an efficient leadership, the Rodas also has a staff member dedicated entirely to managing sustainability and not as an add-on responsibility, which contributes to its non-silo approach and integration across departments.

**Community Initiatives:** Social responsibility is defined as a company's promise to set an example for both employees and guests, as well as to take a leadership role in creating improvements in its surrounding communities. In the context of business, corporate social responsibility (CSR) has the added advantage of resulting in enhanced shareholder value creation for the company, which ultimately enhances the value of the business. Keeping pace with global trends while remaining committed to financial obligations to deliver both private and public benefits enabled the Hotel to reshape its frameworks, rules, and business models in terms of sustainable development. These include:

- **Integrating environment responsibility into culture.** The Rodas has innovatively amalgamated its ethos of sustainability with local customs and

- **Joining hands with larger campaigns.** In accordance with the Prime Minister's Swachh Bharat Campaign for a cleaner India, the Green Team and the citizens of Powai clean the streets to educate citizens and encourage them to maintain a clean environment.
- **Creating employment opportunities for physically and socially challenged people.** The Hotel undertook the *Hunar se Rozgar Tak* scheme of the government of India, whereby skills training is imparted to youth in F&B, Housekeeping, and Food Production. The candidates are required to have a minimum education level and be from weaker sections of society from nearby areas. Upon completion of the training, some skilled personnel are also absorbed into the team.

## Conclusion

The Hotel was successful in ingraining a culture of sustainability in its workforce through its training, Green Team, infrastructure, leadership, partnerships, and ability to engage people in meaningful relationships.



## About HVS

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**THE ECOTEL CERTIFICATION** enables hotels to become sustainable by primarily reducing the environmental impact of their business and becoming financially more viable and socially responsible. The Certification is granted to hotels upon checking a range of earth-friendly practices across five parameters, known as 'The Five Globes': Sustainability Commitment, Waste Management, Energy Management, Water Management, and Employee Education and Community Involvement.

## About the Authors



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