

# **BENCHMARKING ASSESSMENT REPORT**

## **SPA BENCHMARKING**

### **Six Senses Spa at Penha Longa Hotel Spa & Golf Resort Sintra, Portugal**


**Report Date: 26 October 2007**  
**Benchmarked Certificate Expiry: 26 October 2008**

Benchmarking Data Collection Period: 1 July 2006 – 30 June 2007



## OVERVIEW

This annual assessment of **Six Senses Spa at Penha Longa Hotel Spa & Golf Resort** was undertaken against Earthcheck benchmarking indicators and checklists developed for Green Globe and listed below.<sup>1</sup> They have been carefully selected to track performance in key areas of environmental and social performance impact. Their outcomes which are presented in this report are used by Earthcheck to evaluate whether the operation has reached the standards necessary to use the Green Globe Benchmarked Bronze logo.<sup>2</sup>

	 earthcheck	Indicator Measure (Benchmark)
1	Sustainability Policy	Policy is produced and in place
2	Energy Consumption	Energy used (MJ / Treatment Hour) Renewable energy used (%) <sup>3</sup>
3	Water Consumption	Water used (L / Treatment Hour) % of total water used is that is recycled/captured (%) <sup>3</sup> Water saving (Checklist rating) Water source (Checklist rating)
4	Waste Sent to Landfill	Waste landfilled (L / Treatment Hour) % of total waste that is recycled/reused (%) <sup>3</sup> Waste recycling (Checklist rating)
5	Community Commitment	Local employment (Employees living within 20 km of operation / Total employees) Community contributions (Checklist Rating)
6	Paper Products	Paper product types used (Checklist Rating)
7	Treatment & Cleaning Products	Treatment & Cleaning product types used (Checklist rating)
8	Pesticide Products	Pesticide product types used (Checklist Rating)
9	Wellness	Staff Wellness (Checklist Rating)

<sup>1</sup> Please refer to the relevant Green Globe Sector Benchmarking Indicator (SBI) document for more details. For frequently asked questions (FAQs) about benchmarking or specific help, please log on to 'My EC3 Home' and visit your Earthcheck Benchmarking software.

<sup>2</sup> To meet the requirements that allow the right to use the Green Globe Benchmarked Bronze logo, the benchmarks for all the submitted Earthcheck indicators should be at, or better than, the Baseline level. Baseline and Best Practice performance levels are set with reference to the type of activity and appropriate national and international data which take into account social, geographical and climatic impacts.

If an operation fails to meet the minimum requirements for up to two submitted Earthcheck indicators (Baseline performance or better), but achieves Baseline performance or better in all the other Earthcheck indicators, then the operation is allowed to use the Green Globe Benchmarked Bronze logo. It is, however, given a maximum of 12 months to improve performance in at least one of the indicators to Baseline performance or better. If on the next submission this is not achieved without substantiated evidence that the situation was beyond the control of that operation (e.g., occurrence of a natural disaster), then the right to use the Green Globe Benchmarked Bronze logo will be withdrawn.

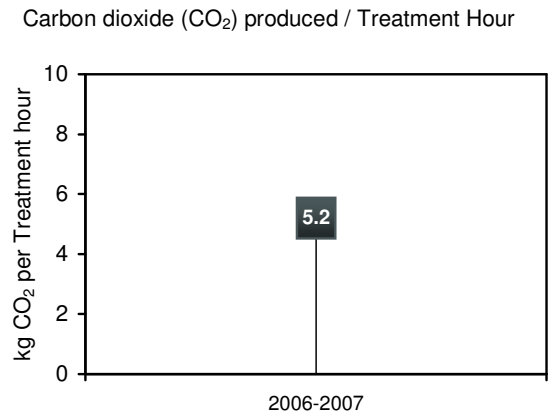
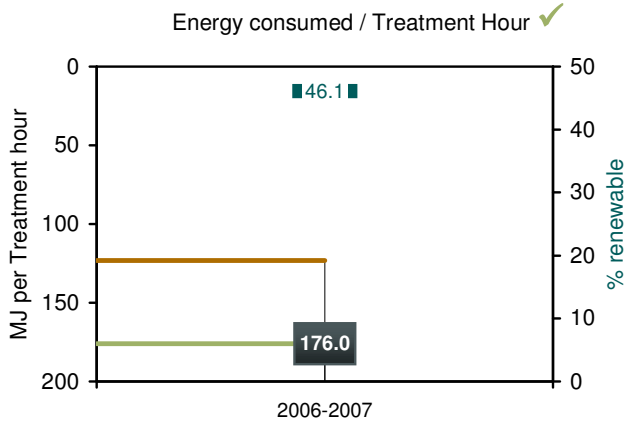
As a standard policy, all Earthcheck indicators are continuously reviewed, along with the performance levels which operators have to achieve in order to use the Green Globe Benchmarked Bronze logo. This review takes into account "business-as-usual" changes in practices and equipment, and is used to update where appropriate Baseline and Best Practice levels. Advanced warning will be given of changes in any benchmarking related requirements and data.

<sup>3</sup> These indicators are for guidance only and do not affect the overall benchmarking evaluation.

**earthcheck**

**SPA PERFORMANCE BENCHMARKS**

- 1 Sustainability Policy ★**
- 2 Energy Consumption**

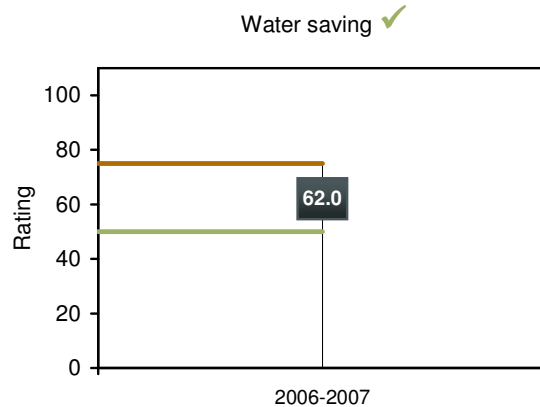
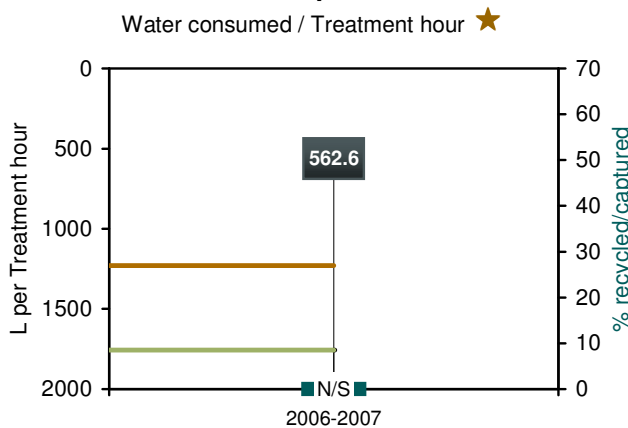


Six Senses Spa at Penha Longa Hotel Spa & Golf Resort consumed 176 MJ per Treatment Hour for the year 2006 - 2007 (01/07/2006 – 30/06/07), which is at the Baseline level.

Reported Energy Consumption for the year 2006 - 2007 (01/07/2006 – 30/06/07) produced an estimated 5.2 kg of CO<sub>2</sub> per Treatment Hour.

Energy type	Quantity used	Calculated Energy		Calculated CO <sub>2</sub>	
		MJ	% of total	kg	% of total
Hydro	124,470 kWh	448,092	46.1	0	0.0
Natural Gas	13,468 m <sup>3</sup>	523,905	53.9	28,500	100.0
Totals:		971,997	100	28,500	100

- 3 Water Consumption**



Six Senses Spa at Penha Longa Hotel Spa & Golf Resort consumed 562.6 L per Treatment Hour for the year 2006 - 2007 (01/07/2006 – 30/06/07), which was 54% better than the Best Practice level.

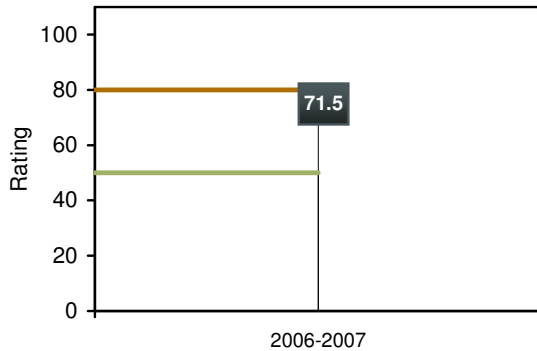
The Water Saving checklist rating for the year 2006 - 2007 (01/07/2006 – 30/06/07), was 12 points better than the Baseline level.

**Performance level:** Baseline — Best Practice —

**Current result:** Below Baseline ✘ At or above Baseline ✓ At or above Best Practice ★



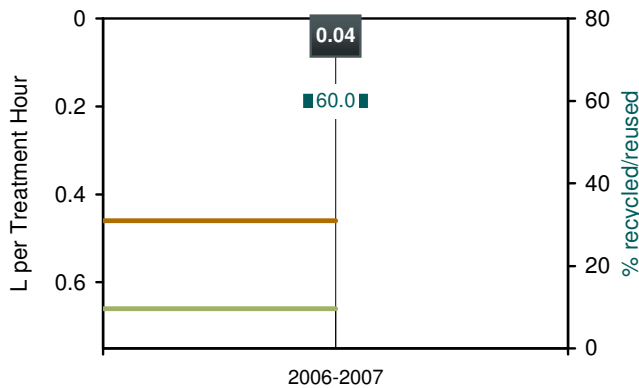
Water Source ✓



The Water Source checklist rating for the year 2006 - 2007 (01/07/2006 – 30/06/07) was 21.5 points better than the Baseline level.

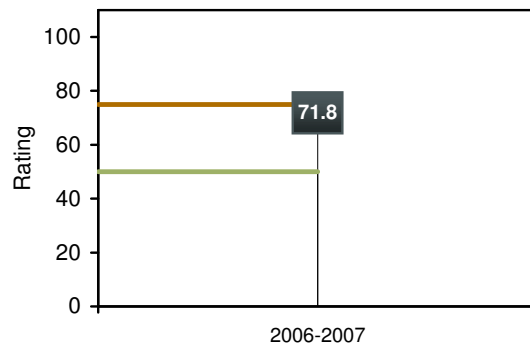
**4 Waste Sent to Landfill**

Waste landfilled / Treatment hour ★



Six Senses Spa at Penha Longa Hotel Spa & Golf Resort produced 0.04 L per Treatment Hour for the year 2006 - 2007 (01/07/2006 – 30/06/07), which was 92 % better than the Best Practice level.

Waste recycling ✓



The Waste Recycling checklist rating for the year 2006 - 2007 (01/07/2006 – 30/06/07), was 21.8 points better than the Baseline level.

**Performance level:**

Baseline

Best Practice

**Current result:**

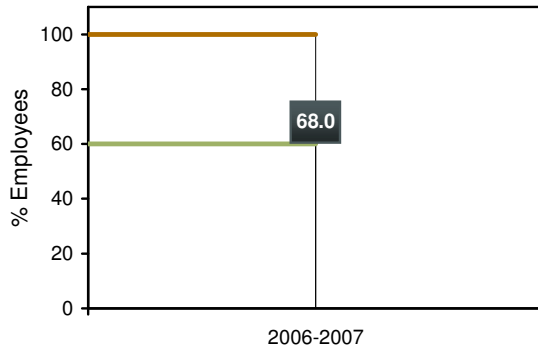
Below Baseline ✖

At or above Baseline ✓

At or above Best Practice ★

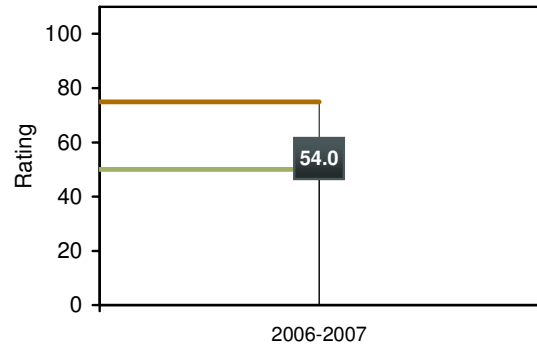
**5 Community Commitment**

Employees living within 20 km of operation /  
Total employees ✓



Community Commitment for the year 2006 - 2007 (01/07/2006 – 30/06/07) was 8% better than the Baseline level.

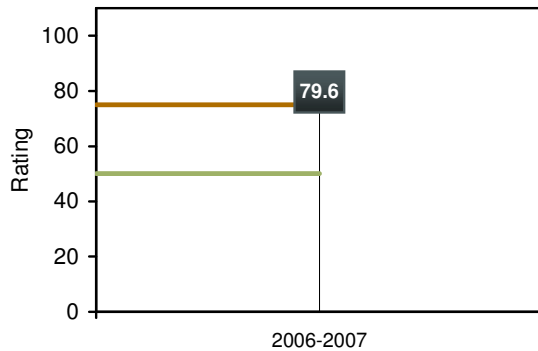
Community contributions ✓



The Community Contributions checklist rating for the year 2006 - 2007 (01/07/2006 – 30/06/07) was 4 points better than the Baseline level.

**6 Paper Products**

Product types used ★



The Paper Products checklist rating for the year 2006 - 2007 (01/07/2006 – 30/06/07) was 4.6 points better than the Best Practice level.

**Performance level:**

Baseline —

Best Practice —

**Current result:**

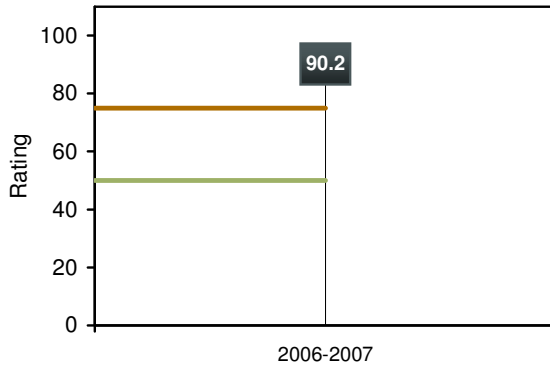
Below Baseline ✖

At or above Baseline ✓

At or above Best Practice ★

**7 Treatment & Cleaning Products**

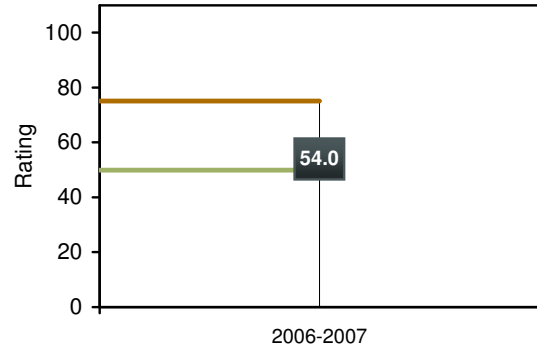
Product types used ★



The Treatment & Cleaning Products checklist for the year 2006 - 2007 (01/07/2006 – 30/06/07) was 15.2 points better than the Best Practice level.

**8 Pesticide Products**

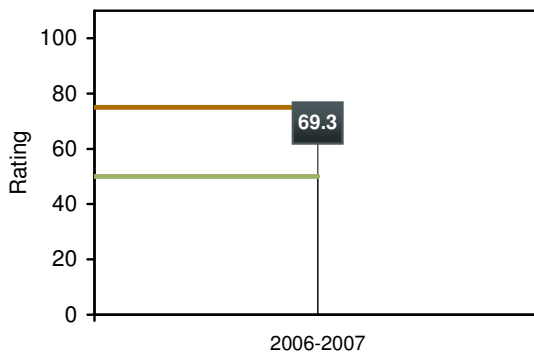
Product types used ✓



The Pesticide Products checklist rating for the year 2006 - 2007 (01/07/2006 – 30/06/07) was 4 points better than the Baseline level.

**9 Wellness**

Staff Wellness ✓



The Wellness checklist rating for the year 2006 - 2007 (01/07/2006 – 30/06/07) was 19.3 points better than the Baseline level.

**Performance level:**

Baseline —

Best Practice —

**Current result:**

Below Baseline ✘

At or above Baseline ✓

At or above Best Practice ★

The supplied data has been compiled by **Six Senses Spa at Penha Longa Hotel Spa & Golf Resort** in the prescribed manner, authorised by a senior executive of the company and submitted for an annual assessment.

## CONCLUSION AND RECOMMENDATIONS

Congratulations, **Six Senses Spa at Penha Longa Hotel Spa & Golf Resort** has passed the requirements of a first-time benchmarking organisation to become recognised as a Green Globe Benchmarked Spa Operation and retains the right to display the Green Globe Benchmarked Bronze logo until the certificate expiry date.



In addition to having a Sustainability Policy in place, all twelve of the assessed Earthcheck indicators are above the Baseline level. From the benchmarking data provided, four indicators, *Water Consumption*, *Waste Sent to Landfill*, *Paper Products* and *Treatment & Cleaning Products* are above the Best Practice level, which is an achievement to be highly commended.

Improvements in all the Earthcheck indicators will not only help the environment, but can also help reduce operational costs. Due to the positive commitment that **Six Senses Spa at Penha Longa Hotel Spa & Golf Resort** has demonstrated to the environment, the assessors are confident that they can maintain or improve performance, where appropriate and practical, in all indicators. In line with Green Globe Policy this would enable Benchmarked Bronze status to be retained.

## APPENDIX

### ENERGY

Originally the operator specified the energy consumption as follows:

- 167,000 kWh of Hydro (power station) which is the equivalent of 601,200 MJ.
- 18,090 cubic metres of natural gas, which is the equivalent of 703,701 MJ.

This gave an energy consumption of 236.4MJ/guest treatment hr.

This was later revised:

The total energy consumption of the resort was reported to be 450,000KWh per month. Of this, the spa operation consumed 5%. Therefore, on a monthly basis, the spa consumes 22,500KWh, which equates to 270,000 KWh annually. When converted, this is the equivalent of 972,000 MJ. This gives an energy consumption of 176.1 MJ/guest treatment hr.

### WASTE SENT TO LANDFILL

The submitted value of 60 kg (specified by the operator as uncompacted waste) has been converted into a volume by using the standard conversion of 300 kg/m<sup>3</sup> for uncompacted waste (i.e. 60 kg / 300 kg/m<sup>3</sup> = 0.2 m<sup>3</sup> or 200 L).

This equates to 0.04 L per treatment hour.



**Benchmarks assessed by Earthcheck**

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**Report endorsed by Green Globe**

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This Report is recognised under the **PATA and Green Globe Co-operative Agreement** that provides PATA with a real impetus to advance the sustainability and goals of the Association.



Under an agreement with Green Globe Asia Pacific (GGAP), the Caribbean Alliance for Sustainable Tourism (CAST) supports the delivery and promotion of the Green Globe program in the Caribbean.

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Green Globe is managed by EC3 Global, a wholly owned subsidiary of the Sustainable Tourism Cooperative Research Centre (STCRC), which is the largest sustainable tourism research organisation in the world. The CRC is an Australian Government Initiative.



**An Australian Government Initiative**

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## SUMMARY OF SUPPLIED BENCHMARKING DATA

Activity Measure(s)						
Guest Treatment Hours	5,521	treatment hours				
Area Under Roof	1,500	m <sup>2</sup>				
<b>Energy Consumption</b>			<b>Community Commitment</b>			
	Indicator			Indicator		
Supplied	971,997	MJ		Supplied	68.0	%
Calculated	176	MJ per th		Baseline	60	%
Baseline	176	MJ per th		Best Practice	100	%
Best Practice	123	MJ per th		% difference	8.0	better than BL
% difference	0.0	at BL				
				Checklist		
Renewable	46.1	%		Rating	54.0	
				Baseline	50	
Total CO <sub>2</sub>	28,500	kg		Best Practice	75	
	5.2	kg per th		points difference	4.0	better than BL
<b>Water Consumption</b>			<b>Paper Products</b>			
	Indicator			Checklist		
Supplied	3,106	m <sup>3</sup>		Supplied Rating	79.6	
Calculated	562.6	L per th		Baseline	50	
Baseline	1757	L per th		Best Practice	75	
Best Practice	1230	L per th		points difference	4.6	better than BP
% difference	54	better than BP				
				<b>Treatment &amp; Cleaning Products</b>		
Recycled/captured	N/S	%		Checklist		
				Supplied Rating	90.2	
	Water Saving			Baseline	50	
Supplied Rating	62.0			Best Practice	75	
Baseline	50			points difference	15.2	better than BP
Best Practice	75					
points difference	12.0	better than BL		<b>Pesticide Products</b>		
				Checklist		
<b>Waste Sent to Landfill</b>				Supplied Rating	54.0	
	Indicator			Baseline	50	
Supplied	0.20	m <sup>3</sup>		Best Practice	75	
Converted	200	L		points difference	4.0	better than BL
Calculated	0.04	L per th				
Baseline	0.66	L per th		<b>Water Source</b>		
Best Practice	0.46	L per th		Checklist		
% difference	92	better than BP		Supplied Rating	71.5	
				Baseline	50	
Recycled/reused	60.0	%		Best Practice	80	
				points difference	21.5	better than BL
	Checklist					
Supplied Rating	71.8			<b>Wellness</b>		
Baseline	50			Checklist		
Best Practice	75			Supplied Rating	69.3	
points difference	21.8	better than BL		Baseline	50	
				Best Practice	75	
				points difference	19.3	better than BL

N/S - Not submitted.

## DETERMINATION OF BASELINE AND BEST PRACTICE LEVELS

### General

The values for the Baseline and Best Practice levels for each indicator are derived from extensive worldwide research into available and appropriate case studies, industry surveys, engineering design handbooks, energy, water and waste audits, and climatic and geographic conditions.

National and regional data for per capita energy use, greenhouse gas and other emissions, wastes to landfill and water consumption, where available provide background data for normalisation of the expected performance values for per customer or employee, and/or overall performance of an enterprise being benchmarked. They are used to gauge the regional or national situation and environmental performances that an enterprise is based in, and hence what are reasonable levels to expect the enterprise to achieve.

A benchmarking result at, or above, the Baseline level demonstrates to all stakeholders that the enterprise is achieving above average performance. A result below the Baseline level indicates that an enterprise can and should carry out actions that will make beneficial improvements in performance.

### Consideration of Climate

A major determinant of energy consumption in some sectors, primarily those centred on buildings such as accommodation, visitor centres and administration offices will be the dominant climatic conditions in which the enterprise is located. In general, to maintain the same level of indoor comfort, enterprises operating in hot or cold climates will consume more energy than those in temperate climates.

Similarly, it is recognised that in certain sectors a major determinant of potable water consumption will be the climate in which an enterprise is located, in particular those with large grounds and/or significant water-based facilities or activities. That is, enterprises located in hot climates are more likely to consume more potable water than equivalent ones located in cooler climates. Factors that are likely to lead to a higher level of potable water consumption, for example in the accommodation sector, include increased evaporation rates of swimming pools, personal bathing and irrigation demands of grounds. In consideration of this factor, Baseline and Best Practice levels can vary in relation to country location.

### Waste Sent to Landfill

The benchmark indicator used for solid waste production (sent to landfill) is given in litres as waste bins are usually calibrated by volume, and it has been found that the majority of operations do not have access to the weight of material disposed of. However, if a weight is supplied, standard factors are used to convert from weight (e.g., kilograms (kg)) to volume (e.g., litres (L)). These are 300 kg/m<sup>3</sup> for uncompacted waste or 650 kg/m<sup>3</sup> for lightly compacted waste.

Operations should make note of the level of compaction when submitting data for assessment by Earthcheck.

### Review of Performance Levels

The Baseline and Best Practice performance levels for Earthcheck indicators are continuously reviewed and are likely to change over time. This review by a team of international experts, takes into account "business-as-usual" changes in practices, equipment and facilities, as well as regulations and general improvement trends in performance and procedures. This review is used to update the levels of Baseline and Best Practice, and provides useful feedback to the user of the indicators.

The list below summarises the basic generic rules used to determine Baseline and Best Practice levels for Earthcheck indicators.

- If relevant enterprise sector specific case studies are not available for a type of activity in a designated region, then national averages will be used to ascertain the Baseline level. In this case, the Best Practice level will be set at a minimum of 30% better performance than the Baseline.
- If case study or national data are not available for a specific indicator, then the first enterprise that benchmarks will have its results set as 15% better than Baseline (i.e., half way between Baseline and Best Practice).