



EARTHCHECK

# BENCHMARKING ASSESSMENT REPORT

COMMUNITY BENCHMARKING  
(REVISED ASSESSMENT)

**SNAEFELLSNES PENINSULA**  
STYKKISHOLMI, ICELAND



REPORT DATE: 5 October 2012

Benchmarking Data Collection Period: 1 January 2010 – 31 December 2010

*The planet deserves more than half measures*

## OVERVIEW

This annual assessment of **Snaefellsnes Peninsula** was undertaken against EarthCheck benchmarking indicators and checklists developed for EarthCheck and listed below<sup>1</sup>. They have been carefully selected to track performance in key areas of environmental and social performance impact. The lead agency responsible for collection, collation and authorisation of the information required by the indicators was the **Snaefellsnes Council of Executives**.

<b>Indicator Measure (Benchmark)</b>		
<b>1</b>	Policy	Policy is produced and in place <sup>2</sup>
<b>2</b>	Energy	Energy Consumption (GJ / Person Year) <sup>3</sup>
		Total CO <sub>2</sub> -e Produced (t CO <sub>2</sub> -e / Person Year) <sup>3</sup>
		Renewable Energy Used (%) <sup>4</sup>
<b>3</b>	Water	Potable Water Consumption (kL / Person Year) <sup>3</sup>
		Recycled / Captured Water (%) <sup>4</sup>
<b>4</b>	Waste	Waste Sent to Landfill (t / Person Year) <sup>3</sup>
		Recycled / Reused / Composted Waste (%) <sup>4</sup>
<b>5</b>	Sector Specific	Nitrous Oxides Produced (kg / Person Year/ Area) <sup>5</sup>
		Sulphur Dioxide Produced (kg / Person Year/ Area) <sup>5</sup>
		Particulate Matter Produced (kg / Person Year/ Area) <sup>5</sup>
		Water Samples Passed (%) <sup>2</sup>
		Habitat Conservation Area (%) <sup>2</sup>
		Green Space (%) <sup>2</sup>
		Accredited Operations (%) <sup>2</sup>
<b>Lead Agency Performance</b>		
	Water Saving	Water Saving Rating <sup>6</sup>
	Waste Recycling	Waste Recycling Rating <sup>6</sup>
<b>6</b>	Paper Products	Paper Products Rating <sup>6</sup>
	Cleaning Products	Cleaning Products Rating <sup>6</sup>
	Pesticide Products	Pesticide Products Rating <sup>6</sup>

<sup>1</sup> Please refer to the relevant EarthCheck Sector Benchmarking Indicator (SBI) document for more details. For frequently asked questions (FAQs) about benchmarking or specific help, please log on to 'My EarthCheck'

<sup>2</sup> Produced by the lead agency after consultation with the community and consensus

<sup>3</sup> Person year is equivalent to 365 person days. EarthCheck Communities must also allow for both resident and transient (tourist) populations in indicators assessed on a per person year basis. Tourist activity is classified into an "overnight stay" or "day tripper". An overnight stay is counted the same as a permanent resident, that is, 1 person day. A day tripper is counted as 0.333 person day.<sup>4</sup>

<sup>4</sup> These indicators are for guidance only and do not affect the overall benchmarking evaluation

<sup>5</sup> Primary assessed impacts on air quality are emissions due to electricity consumption, vehicular transport, industrial processes and mining. The levels are calculated on a per unit area basis using total emissions and total bounded area of the Community, including waterways. The data is then normalized against the average number of person years per area of the country

<sup>6</sup> Assessed for the lead agency only

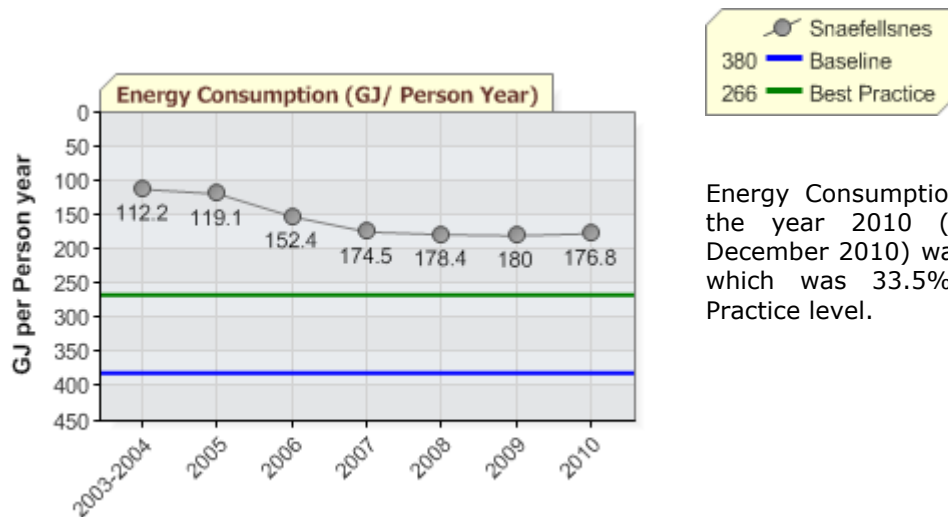
## COMMUNITY PERFORMANCE BENCHMARKS

**Current performance:** Below Baseline ✖ At or above Baseline ✔ At or above Best Practice ★

1. Policy ★

2. Energy

**Energy Consumption (GJ / Person Year) ★**

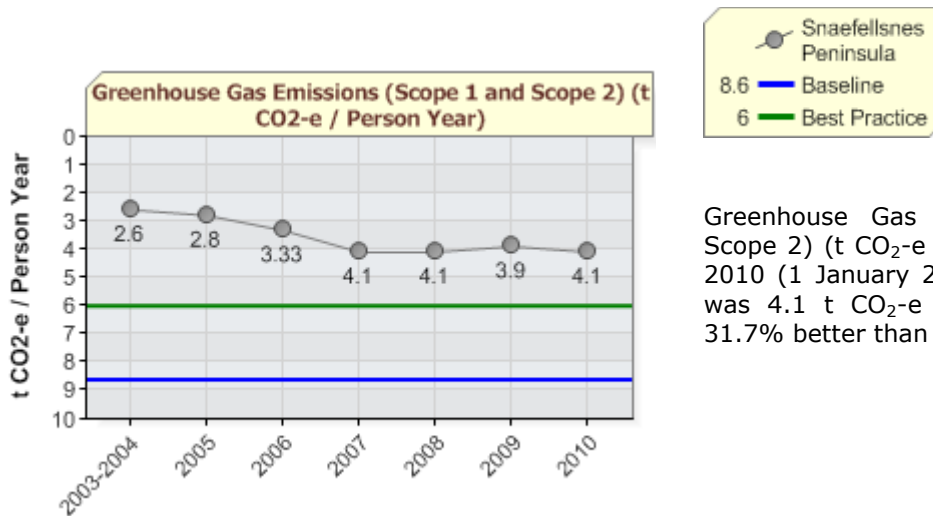


Energy Consumption (GJ / Person Year) for the year 2010 (1 January 2010 - 31 December 2010) was 176.8 GJ / Person Year, which was 33.5% better than the Best Practice level.

**Green Power (%)**

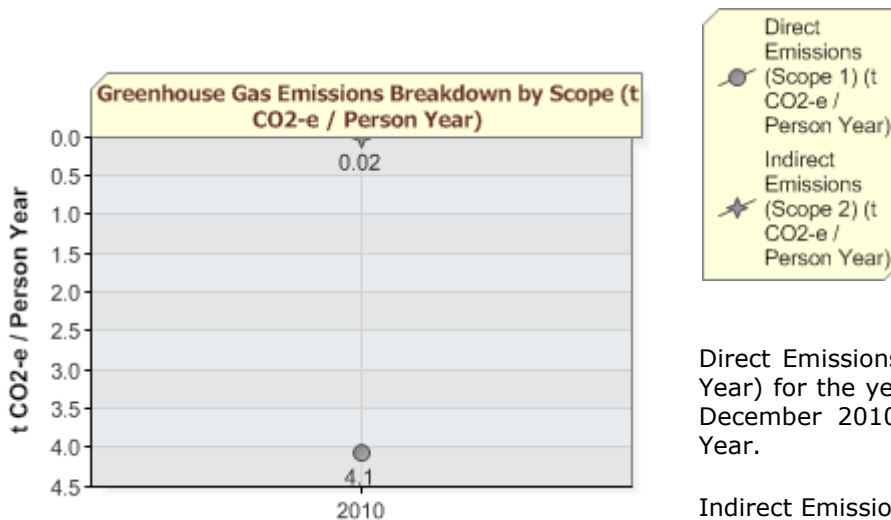
N/A

## Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO<sub>2</sub>-e / Person Year) ★



Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO<sub>2</sub>-e / Person Year) for the year 2010 (1 January 2010 – 31 December 2010) was 4.1 t CO<sub>2</sub>-e / Person Year which was 31.7% better than the Best Practice Level.

## Greenhouse Gas Emissions Breakdown by Scope (t CO<sub>2</sub>-e / Person Year)



Direct Emissions (Scope 1) (t CO<sub>2</sub>-e / Person Year) for the year 2010 (1 January 2010 – 31 December 2010) was 4.1 t CO<sub>2</sub>-e / Person Year.

Indirect Emissions (Scope 2) (t CO<sub>2</sub>-e / Person Year) for the year 2010 (1 January 2010 – 31 December 2010) was 0.02 t CO<sub>2</sub>-e / Person Year.

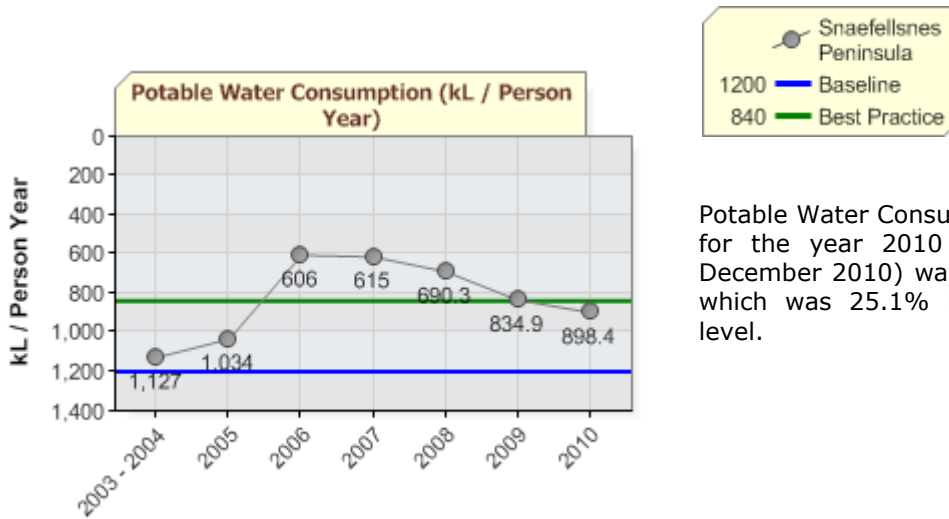
<b>Direct Emissions (Scope 1)</b>								
<b>Stationary Fuel Combustion</b>								
Type	Quantity	Unit	Energy Consumption (MJ)	CO <sub>2</sub> Emission Estimate (t CO <sub>2</sub> -e)	CH <sub>4</sub> Emission Estimate (t CO <sub>2</sub> -e)	N <sub>2</sub> O Emission Estimate (t CO <sub>2</sub> -e)	Total Emission Estimate (t CO <sub>2</sub> -e)	
Heavy fuel oil	190543	litres (L)	6935071.6	536.8	1.5	1.3	539.5	
subtotal			6935071.6	536.8	1.5	1.3	539.5	
<b>Mobile Fuel Combustion (road)</b>								
Motor gasoline	2277026	litres (L)	74171366.7	5140.1	38.9	183.9	5363.0	
Diesel	3599661	litres (L)	130948467.9	9703.3	10.7	158.3	9872.3	
subtotal			205119834.6	14843.4	49.7	342.3	15235.3	
<b>Mobile Fuel Combustion (water)</b>								
Heavy fuel oil	459006	litres (L)	16706147.6	1293.1	2.5	10.4	1305.9	
subtotal			16706147.6	1293.1	2.5	10.4	1305.9	
<b>TOTAL</b>			<b>228761053.8</b>	<b>16673.2</b>	<b>53.6</b>	<b>353.9</b>	<b>17080.7</b>	
<b>Indirect Emissions (Scope 2)</b>								
<b>Purchased Electricity</b>								
Quantity	Unit	% Green Power	Provider	Energy Consumption (MJ)	CO <sub>2</sub> Emission Estimate (t CO <sub>2</sub> -e)	CH <sub>4</sub> Emission Estimate (t CO <sub>2</sub> -e)	N <sub>2</sub> O Emission Estimate (t CO <sub>2</sub> -e)	Total Emission Estimate (t CO <sub>2</sub> -e)
91365149	Kilowatt hour (kWh)	N/A*	Iceland	328914536.4	41.4	0.1	0.3	41.8
476720	Kilowatt hour (kWh)	N/A*	Iceland	1716192.0	0.2	0.0	0.0	0.2
50741848	Kilowatt hour (kWh)	N/A*	Iceland	182670652.8	23.0	0.0	0.2	23.2
subtotal				513301381.2	64.7	0.1	0.4	65.2
<b>TOTAL</b>				<b>513301381.2</b>	<b>64.7</b>	<b>0.1</b>	<b>0.4</b>	<b>65.2</b>
<b>Greenhouse Gas Emissions (Scope 1 and Scope 2)</b>								
<b>GRAND TOTAL</b>				<b>742062435.0</b>	<b>16737.9</b>	<b>53.7</b>	<b>354.4</b>	<b>17145.9</b>

\*A Green Power Agreement is unavailable for purchase as the standard grid supply is from close to 100% renewable energy sources.

<b>Indirect Emissions (Scope 3)</b>									
<b>Waste Sent to Landfill</b>									
<b>Quantity</b>	<b>Unit</b>	<b>Type of Landfill</b>	<b>Type of Waste</b>	<b>Type of Operation</b>	<b>Source</b>	<b>CO<sub>2</sub> Emission Estimate (t CO<sub>2</sub>-e)</b>	<b>CH<sub>4</sub> Emission Estimate (t CO<sub>2</sub>-e)</b>	<b>N<sub>2</sub>O Emission Estimate (t CO<sub>2</sub>-e)</b>	<b>Total Emission Estimate (t CO<sub>2</sub>-e)</b>
2262	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Other inert	Other Operation	International	0.0	0.0	0.0	0.0
subtotal						0.0	0.0	0.0	0.0
<b>TOTAL</b>						<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

### 3. Water

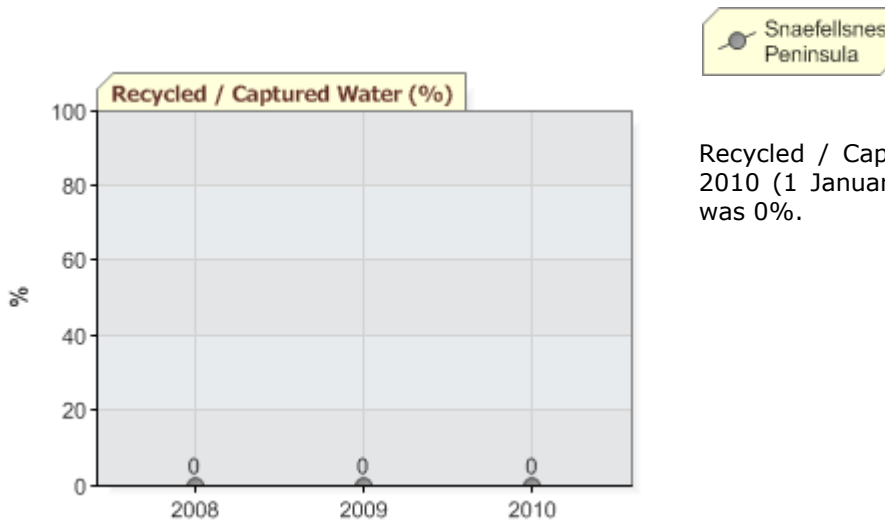
#### Potable Water Consumption (kL / Person Year) ✓



Potable Water Consumption (kL / Person Year) for the year 2010 (1 January 2010 - 31 December 2010) was 898.4 kL / Person Year, which was 25.1% better than the Baseline level.

Quantity	Unit	Potable Water Consumption (kL)
3770708	kilolitres (kL)	3770708.0 kL
	<b>Totals:</b>	<b>3770708.0 kL</b>

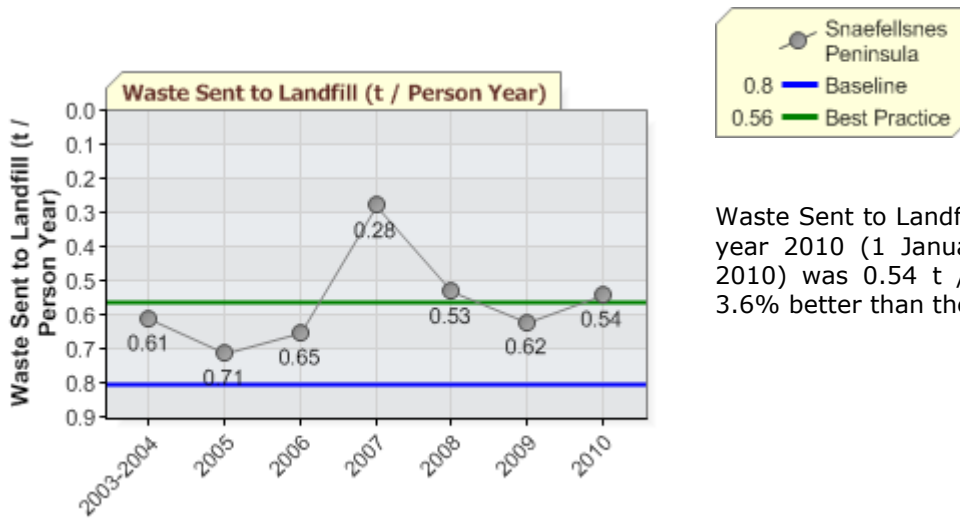
#### Recycled / Captured Water (%)



Recycled / Captured Water (%) for the year 2010 (1 January 2010 - 31 December 2010) was 0%.

## 4. Waste

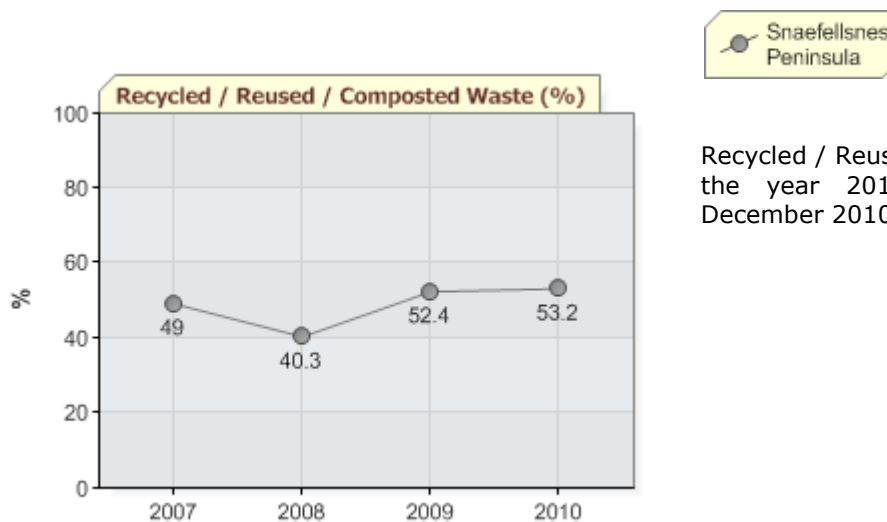
### Waste Sent to Landfill (t / Person Year) ★



Waste Sent to Landfill (t / Person Year) for the year 2010 (1 January 2010 – 31 December 2010) was 0.54 t / Person Year, which was 3.6% better than the Best Practice level.

Quantity	Unit	Type of Landfill	Type of Waste	Type of Operation	Waste Sent to Landfill (m <sup>3</sup> )
2262	tonnes (uncompacted)	Covered and/or managed waste treatment facility	Unknown	Other Operation	7540.0 m <sup>3</sup>
				<b>Totals:</b>	<b>7540.0 m<sup>3</sup></b>

### Recycled / Reused / Composted Waste (%)

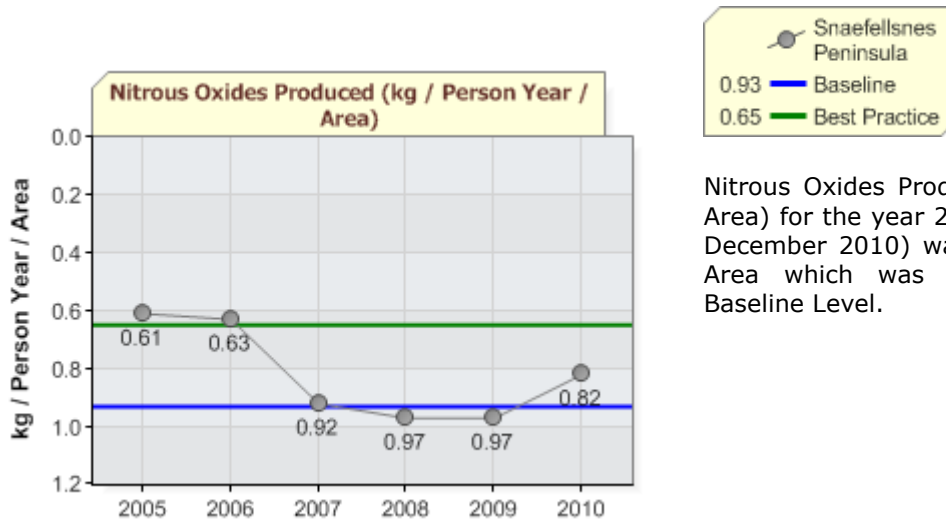


Recycled / Reused / Composted Waste (%) for the year 2010 (1 January 2010 – 31 December 2010) was 53.2%.



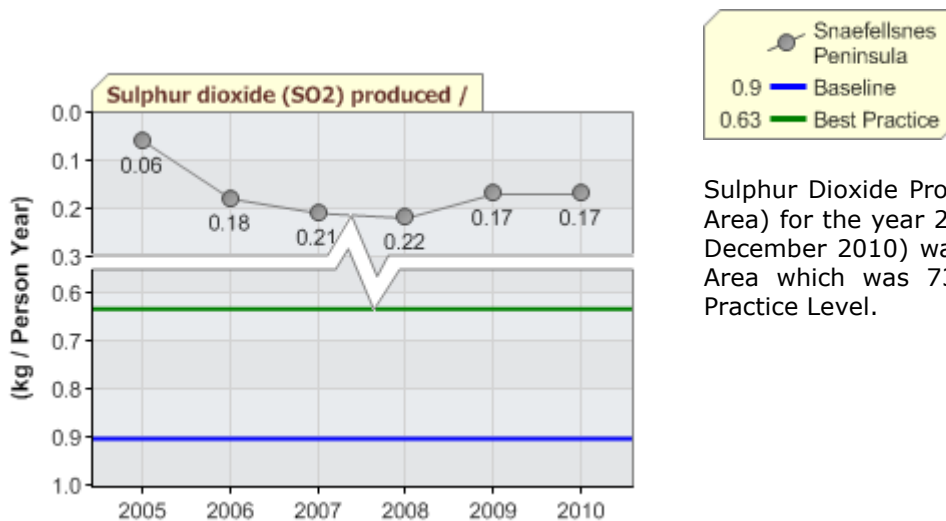
## 5. Sector Specific

### Nitrous Oxides Produced (kg / Person Year / Area) ✓



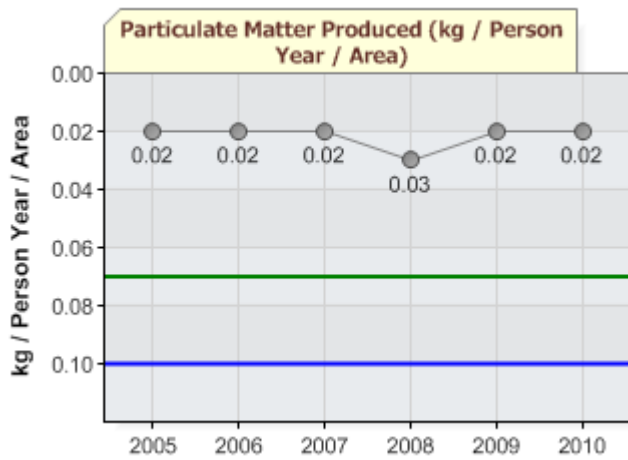
Nitrous Oxides Produced (kg / Person Year / Area) for the year 2010 (1 January 2010 – 31 December 2010) was 0.82 kg / Person Year / Area which was 11.8% better than the Baseline Level.

### Sulphur Dioxide Produced (kg / Person Year / Area) ★



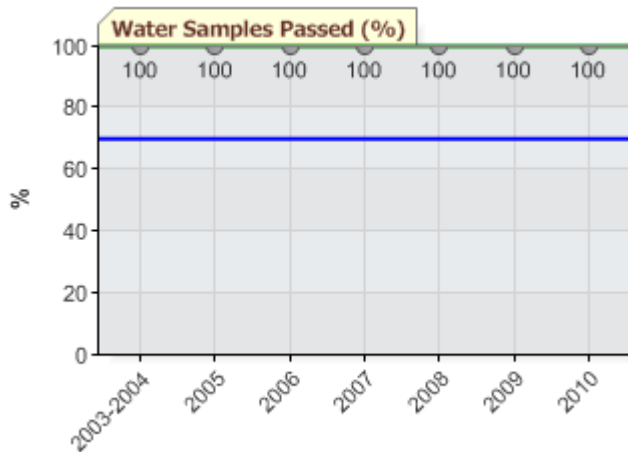
Sulphur Dioxide Produced (kg / Person Year / Area) for the year 2010 (1 January 2010 – 31 December 2010) was 0.17 kg / Person Year / Area which was 73% better than the Best Practice Level.

## Particulate Matter Produced (kg / Person Year) ★



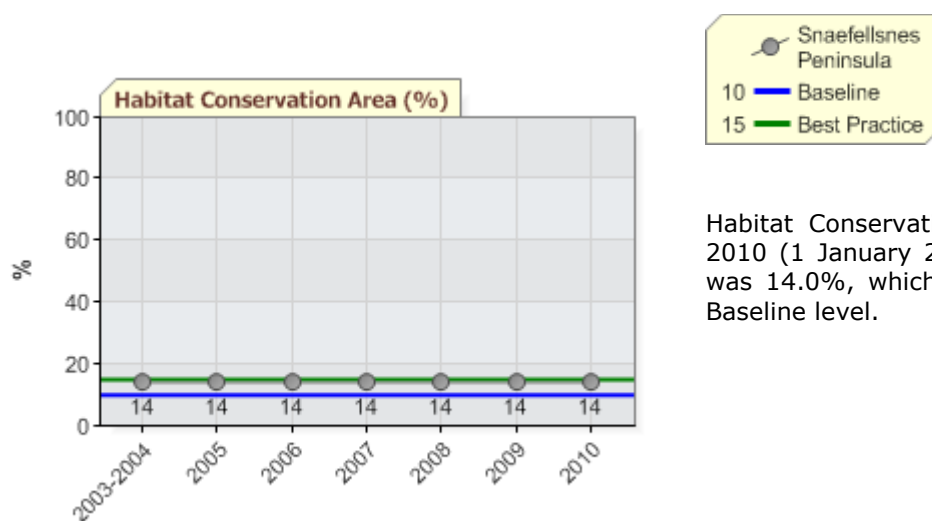
Particulate Matter Produced (kg / Person Year / Area) for the year 2010 (1 January 2010 – 31 December 2010) was 0.02 kg / Person Year / Area which was 71.4 better than best Practice Level.

## Water Samples Passed (%) ★



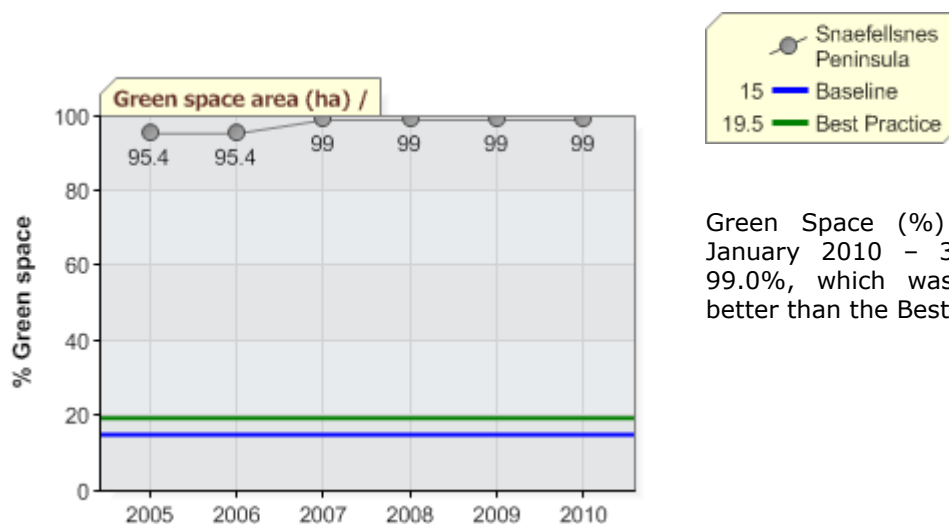
Water Samples Passed (%) for the year 2010 (1 January 2010 – 31 December 2010) was 100%, which was at the Best Practice level.

## Habitat Conservation Area (%) ✓



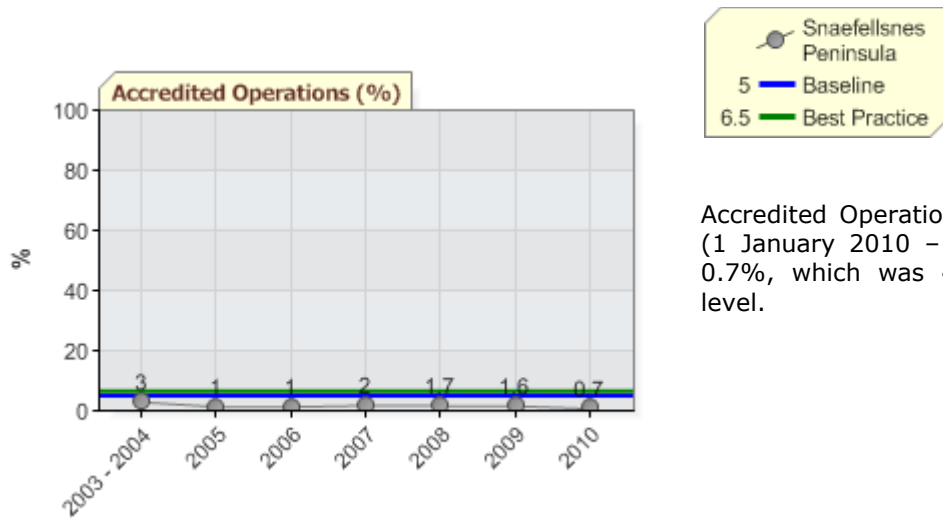
Habitat Conservation Area (%) for the year 2010 (1 January 2010 - 31 December 2010) was 14.0%, which was 40% better than the Baseline level.

## Green Space (%) ★



Green Space (%) for the year 2010 (1 January 2010 - 31 December 2010) was 99.0%, which was approximately 4 times better than the Best Practice Level.

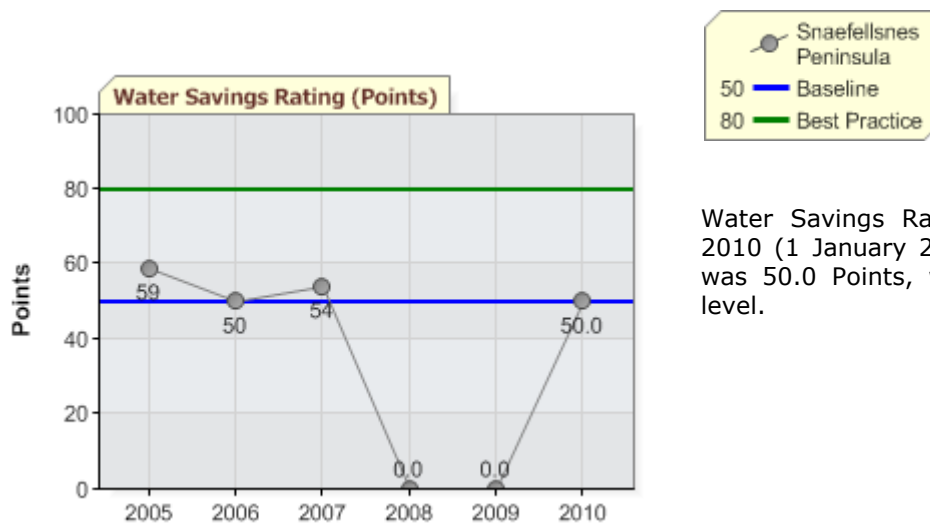
## Accredited Operations (%) ✕



Accredited Operations (%) for the year 2010 (1 January 2010 – 31 December 2010) was 0.7%, which was 4.3% below the Baseline level.

## 6. Lead Agency Performance

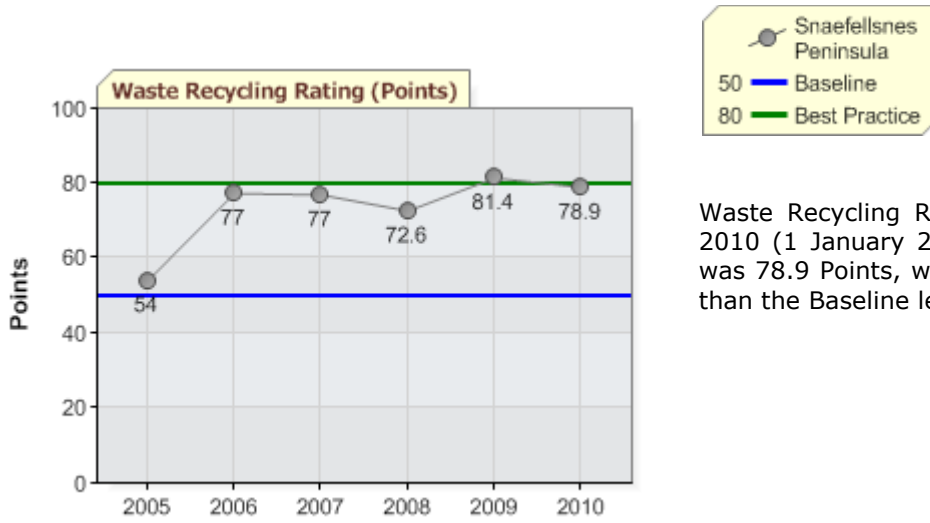
### Water Savings Rating (Points) ✓



Water Savings Rating (Points) for the year 2010 (1 January 2010 - 31 December 2010) was 50.0 Points, which was at the Baseline level.

Water Savings Measures	Frequency / Percentage Rating	Water Savings Rating (Points)
Check for leaks	Relevant / Not Available	50.0 Points
Low/dual flush toilets	Relevant / Not Available	50.0 Points
Low flow tap fittings	Relevant / Not Available	50.0 Points
Low flow shower fittings	Relevant / Not Available	50.0 Points
Water sprinklers used after dark	Relevant / Not Available	50.0 Points
Minimal irrigation landscaping	Relevant / Not Available	50.0 Points
Use of recycle/grey/rain water	Relevant / Not Available	50.0 Points
	<b>Overall Rating:</b>	<b>50.0 Points</b>

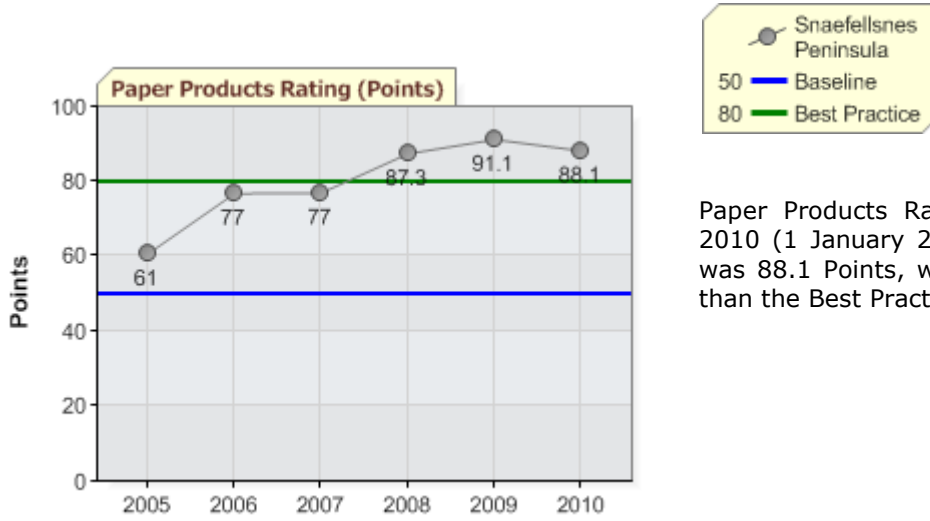
**Waste Recycling Rating (Points) ✓**



Waste Recycling Rating (Points) for the year 2010 (1 January 2010 – 31 December 2010) was 78.9 Points, which was 28.9 Points better than the Baseline level.

Waste Recycling Measures	Frequency / Percentage Rating	Waste Recycling Rating (Points)
Glass	80-99%	88.9 Points
Paper/card	20-39%	58.8 Points
Iron & steel (ferrous metals)	80-99%	88.9 Points
Other metals (non-ferrous)	Not Relevant / Not Available	
Plastics	80-99%	88.9 Points
Rubber	60-79%	73.9 Points
Green waste	60-79%	73.9 Points
	<b>Overall Rating:</b>	<b>78.9 Points</b>

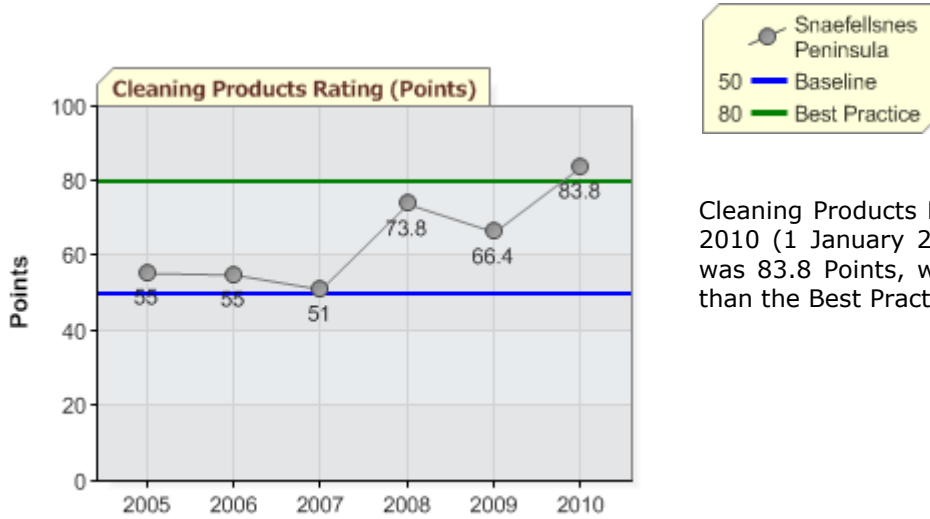
**Paper Products Rating (Points) ★**



Paper Products Rating (Points) for the year 2010 (1 January 2010 – 31 December 2010) was 88.1 Points, which was 8.1 Points better than the Best Practice level.

Paper Products Measures	Frequency / Percentage Rating	Paper Products Rating (Points)
Office paper	80-99%	88.9 Points
Serviettes	100%	100.0 Points
Tissues	80-99%	88.9 Points
Toilet tissue	60-79%	73.9 Points
Paper towels	80-99%	88.9 Points
	<b>Overall Rating:</b>	<b>88.1 Points</b>

## Cleaning Products Rating (Points) ★

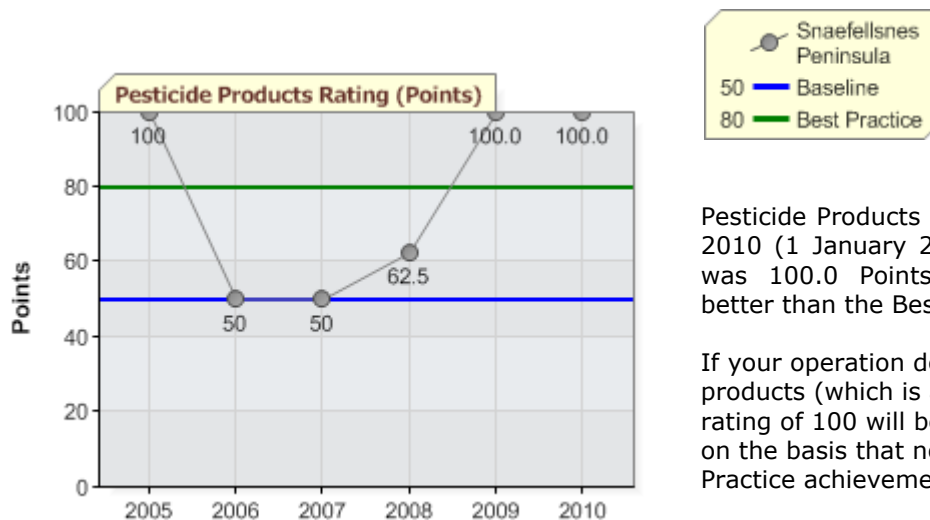


Cleaning Products Rating (Points) for the year 2010 (1 January 2010 – 31 December 2010) was 83.8 Points, which was 3.8 Points better than the Best Practice level.

Cleaning Products Measures	Frequency / Percentage Rating	Cleaning Products Rating (Points)
Hard floor cleaners	80-99%	88.9 Points
Carpet cleaners	Not Relevant / Not Available	100.0 Points
Interior surface cleaners	40-59%	65.1 Points
External surface cleaners	100%	100.0 Points
Glass cleaners	100%	100.0 Points
Detergents	60-79%	73.9 Points
Personal hygiene	20-39%	58.8 Points
	<b>Overall Rating:</b>	<b>83.8 Points</b>



## Pesticide Products Rating (Points) ★



Pesticide Products Rating (Points) for the year 2010 (1 January 2010 – 31 December 2010) was 100.0 Points, which was 20.0 Points better than the Best Practice level.

If your operation does not use any pesticide products (which is a positive outcome), a rating of 100 will be reported for this indicator on the basis that no use represents a Best Practice achievement.

Pesticide Products Measures	Frequency / Percentage Rating	Pesticide Products Rating (Points)
Weed killers	Not Relevant / Not Available	100.0 Points
Fungal killers	Not Relevant / Not Available	100.0 Points
Rodent killers	Not Relevant / Not Available	100.0 Points
Insect killers	Not Relevant / Not Available	100.0 Points
	<b>Overall Rating:</b>	<b>100.0 Points</b>

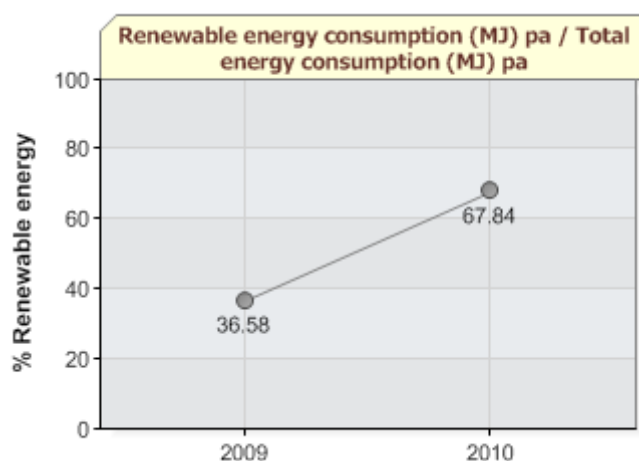
## OPTIONAL INDICATORS

**Snaefellsnes Peninsula** has also nominated optional Operation Selected and specified Indicators that they consider relevant to their specific and specified operation and locality. The Operation Selected Indicators do not form part of the formal annual benchmarking exercise.

### 1. Selected Indicators

Selected Indicators are from a supplied list of EarthCheck indicators.

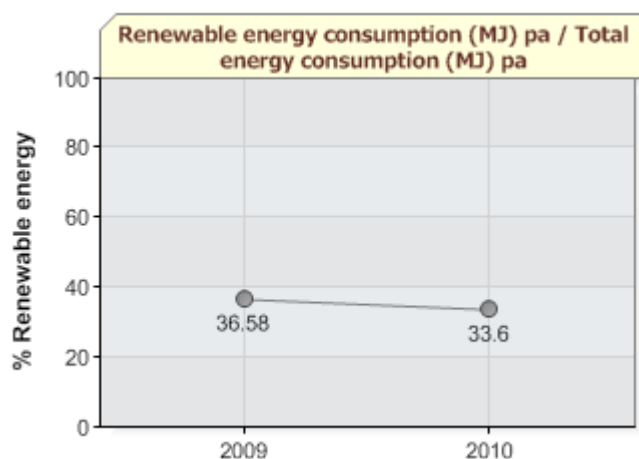
#### Renewable energy consumption (MJ) pa / Total energy consumption (MJ) pa



### 2. Specified Indicators

#### Renewable local energy production (MJ) pa / Total energy consumption (MJ) pa

Specified Indicators are devised by the operator for local and/or internal performance assessment.

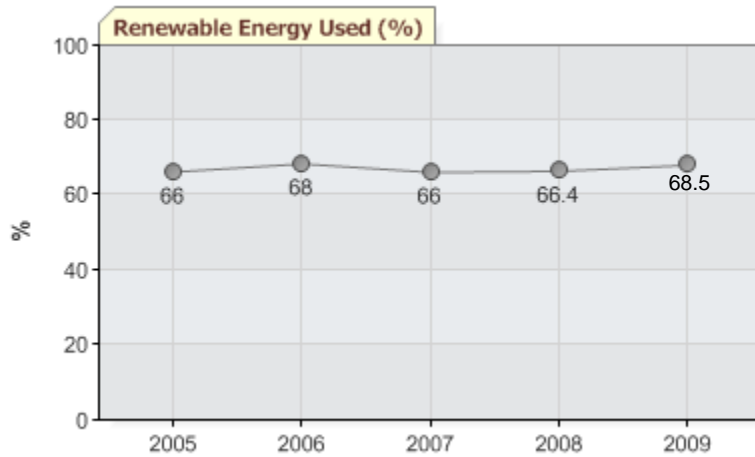


## HISTORIC BENCHMARKING INDICATORS

### 1. Renewable Energy

Renewable Energy % is no longer a supplementary indicator; it is included here for historical reference.

#### Renewable Energy Used (%)



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The supplied data has been compiled by **Snaefellsnes Peninsula** in the prescribed manner, authorised by a senior executive of the company and submitted for an annual assessment.

## CONCLUSION AND RECOMMENDATIONS

Congratulations, **Snaefellsnes Peninsula** has passed the requirements to be recognised as an EarthCheck Benchmarked Community.

In addition to having a Sustainability Policy in place, fifteen of the assessed EarthCheck indicators are at or above the Baseline level. From the benchmarking data provided, ten indicators, *Energy Consumption, Greenhouse Gas Emissions (Scope 1 and 2), Sulphur Dioxide Produced, Particulate Matter Produced, Water Samples Passed, Green Space, Paper Products Rating, Cleaning Products Rating* and *Pesticide Products Rating* are at or above the Best Practice level, which is an achievement to be highly commended.

The one indicator that fell below the Baseline level was *Accredited Operations*.

The value for Accredited Operations was 0.7%. The **Snaefellsnes Peninsula** is encouraged to promote environmental accreditation to hotels, restaurants and other business within the community.

It is acknowledged that whilst information presented in the benchmarking assessment report displays results for the years 2003 – 2010, it is **Snaefellsnes Peninsula's** sixth benchmarking assessment. The information for the 2009 benchmarking period represents historical data and has not been formally assessed. It has been requested by the operation to be displayed in the report to provide an overall reflection of the organisation's operational performance.

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 **Snaefellsnes Peninsula** has demonstrated to the environment, the assessors are confident that they can maintain or improve performance, where appropriate and practical, in all indicators. In particular over the next 12 months, the **Snaefellsnes Peninsula** is encouraged to ensure that Accredited Operations is at Baseline performance or better. In line with EarthCheck Policy this would enable the **Snaefellsnes Peninsula** to continue to meet the benchmarking requirements of the EarthCheck program.

## APPENDIX

### HISTORICAL DATA

It is acknowledged that whilst information presented in the benchmarking assessment report displays results for the years 2003 – 2010, it is **Snaefellsnes Peninsula's** sixth benchmarking assessment. The information for the 2009 benchmarking period represents historical data and has not been formally assessed. It has been requested by the operation to be displayed in the report to provide an overall reflection of the organisation's operational performance.

### ENERGY CONSUMPTION

Clarification was sought in regards to *Green Power %* and the difference between *Renewable Energy %*. The following was advised by the Benchmarking Team;

*You will notice that the Green power % has replaced the Renewable Energy % indicator in the Benchmarking report. These two indicators measure different information.*

*The Green Power agreement is referring to a contractual agreement to purchase an additional percentage of green power from your energy supplier, whereas the Renewable Energy % is measuring the % of Renewable Energy from the total energy consumption.*

**Snaefellsnes Peninsula** advised:

*"It can be said that the Snaefellsnes energy supplier provides 100% renewable sources (hydropower and geothermal power). So according to your information this should be Not Relevant/Not Available."*

Green Power was revised to N/A as shown below;

#### Purchased Electricity

Quantity	Unit	% Green Power	Provider	Energy Consumption (MJ)
91365149	Kilowatt hour (kWh)	N/A	Iceland	328914536.4
476720	Kilowatt hour (kWh)	N/A	Iceland	1716192.0
50741848	Kilowatt hour (kWh)	N/A	Iceland	182670652.8

The revised energy table can be seen on page number 4 and 5.



**EARTHCHECK**

**Benchmarks Assessed by EarthCheck**

# SUMMARY OF SUPPLIED BENCHMARKING DATA

## Activity Measures

Person Years	4197
Total Community Area	147900

## Supplied Benchmarking Data

### Energy

#### Energy Consumption (MJ / Person Year)

Supplied	742062435.0 MJ
Calculated	176.8 MJ / Person Year
Baseline	380 MJ / Person Year
Best Practice	266 MJ / Person Year
Difference	33.5% better than the Best Practice level

#### Green Power (%)

N/A

#### Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO<sub>2</sub>-e / Person Year)

Supplied	17145.9 t CO <sub>2</sub> -e
Calculated	4.1 t CO <sub>2</sub> -e / Person Year
Baseline	8.6 t CO <sub>2</sub> -e / Person Year
Best Practice	6 t CO <sub>2</sub> -e / Person Year
Difference	31.7% better than the Best Practice Level.

#### Direct Emissions (Scope 1) (t CO<sub>2</sub>-e / Person Year)

Supplied	17080.7 t CO <sub>2</sub> -e
Calculated	4.1 t CO <sub>2</sub> -e / Person Year

#### Indirect Emissions (Scope 2) (kg CO<sub>2</sub>-e / Person Year)

Supplied	65206.7 kg CO <sub>2</sub> -e
Calculated	15.5 kg CO <sub>2</sub> -e / Person Year

#### Indirect Emissions (Scope 3) (kg CO<sub>2</sub>-e / Person Year)

Supplied	0.0 kg CO <sub>2</sub> -e
Calculated	0.0 kg CO <sub>2</sub> -e / Person Year

#### Waste Indirect Emissions (Scope 3) (kg CO<sub>2</sub>-e / Person Year)

Supplied	0.0 kg CO <sub>2</sub> -e
Calculated	0.0 kg CO <sub>2</sub> -e / Person Year

### Water

#### Potable Water Consumption (kL / Person Year)

Supplied	3770708.0 kL
Calculated	898.4 kL / Person Year
Baseline	1200 kL / Person Year
Best Practice	840 kL / Person Year
Difference	25.1% better than the Baseline level

#### Recycled / Captured Water (%)

Supplied	0%
Calculated	0%

#### Water Savings Rating (Points)

Supplied	50.0 Points
Calculated	50.0 Points
Baseline	50 Points
Best Practice	80 Points
Difference	at the Baseline level

### Waste

#### Waste Sent to Landfill (t / Person Year)

Supplied	2 262 t
Calculated	0.54 t / Person Year
Baseline	0.8 t / Person Year
Best Practice	0.56 t / Person Year
Difference	3.6% better than the Best Practice level

#### Recycled / Reused / Composted Waste (%)

Supplied	53.2%
Calculated	53.2%

#### Waste Recycling Rating (Points)

Supplied	78.9 Points
Calculated	78.9 Points
Baseline	50 Points
Best Practice	80 Points
Difference	28.9 Points better than the Baseline level

## Paper

### Paper Products Rating (Points)

Supplied	88.1 Points
Calculated	88.1 Points
Baseline	50 Points
Best Practice	80 Points
Difference	8.1 Points better than the Best Practice level

## Cleaning

### Cleaning Products Rating (Points)

Supplied	83.8 Points
Calculated	83.8 Points
Baseline	50 Points
Best Practice	80 Points
Difference	3.8 Points better than the Best Practice level

## Pesticides

### Pesticide Products Rating (Points)

Supplied	100.0 Points
Calculated	100.0 Points
Baseline	50 Points
Best Practice	80 Points
Difference	20.0 Points better than the Best Practice level

## Sector Specific

### Nitrous Oxides Produced (kg / Person Year/ Hectare)

Supplied	133,077 kg
Calculated	0.82 kg / Person Year / Area
Baseline	0.93 kg / Person Year / Area
Best Practice	0.65 kg / Person Year / Area
Difference	11.8% better than the Baseline Level

### Sulphur Dioxide Produced (kg / Person Year)

Supplied	10 503 kg
Calculated	0.17 kg / Person Year / Area
Baseline	0.9 kg / Person Year / Area
Best Practice	0.63 kg / Person Year / Area e
Difference	73% better than the Best Practice Level.

### Particulate Matter Produced (kg / Person Year)

Supplied	493 313 kg
Calculated	0.02 kg / Person Year / Area
Baseline	0.2 kg / Person Year / Area e
Best Practice	0.07 kg / Person Year / Area
Difference	71.4% better than Best Practice Level

### Water Samples Passed (%)

Supplied	100%
Calculated	100%
Baseline	70 %
Best Practice	100 %
Difference	at the Best Practice level

### Habitat Conservation Area (%)

Supplied	14.0%
Calculated	14.0%
Baseline	10 %
Best Practice	15 %
Difference	40% better than the Baseline level

### Green Space (%)

Supplied	99.0%
Calculated	99.0%
Baseline	15 %
Best Practice	19.5 %
Difference	Approximately 4 times better than the Best Practice level

### Accredited Operations (%)

Supplied	0.7%
Calculated	0.7%
Baseline	5 %
Best Practice	6.5 %
Difference	4.3% below the Baseline level

## 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 Waste 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., cubic metres (m<sup>3</sup>) or litres (L)). These are: 1 kg (uncompacted waste) = 0.00333333 m<sup>3</sup> or 3.33333 L and 1 kg (compacted waste) = 0.00153846 m<sup>3</sup> or 1.53846 L.

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).