EARTHCHECK

BENCHMARKING ASSESSMENT REPORT

COMMUNITY BENCHMARKING

WESTFJORDS
ÍSAFJÖRÐUR, ICELAND

REPORT DATE: 13 December 2013

Benchmarking Data Collection Period: 1 January 2012 – 31 December 2012

The planet deserves more than half measures

OVERVIEW

This annual assessment of **Westfjords** was undertaken against EarthCheck benchmarking indicators and checklists developed for EarthCheck and listed below. [1] 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 authorization of the information required by the indicators was the **Municipality Association of the Westfjords**.

	Indicator Measure (Benchmark)
1 Policy	Policy is produced and in place[2]
2 Energy	Energy Consumption (GJ / Person Year)[3] Green Power (%)[3] Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO_2-e / Person Year)[3] Indirect Emissions (Scope 3) (t CO_2-e / Person Year)[3]
3 Water	Potable Water Consumption (kL / Person Year)[3] Recycled / Captured Water (%)[4]
4 Waste	Waste Sent to Landfill (t / Person Year)[3] Recycled / Reused / Composted Waste (%)[4]
5 Sector Specific	Nitrous Oxides Produced (kg / Person Year)[3,5] Sulphur Dioxide Produced (kg / Person Year)[3,5] Particulate Matter Produced (kg / Person Year)[3,5] Water Samples Passed (%)[2] Habitat Conservation Area (%)[2] Green Space (%)[2] Accredited Operations (%)[2]
6	**Lead Agency Performance** Water Savings Rating (Points)[6] Waste Recycling Rating (Points)[6] Paper Products Rating (Points)[6] Cleaning Products Rating (Points)[6] Pesticide Products Rating (Points)[6]

[1] Refer to the EarthCheck Sector Benchmarking Indicator (SBI) document for more information. For frequently asked questions (FAQs) about benchmarking or specific help, please log on to 'My EarthCheck' and visit your EarthCheck Benchmarking software.

[2] Produced by the lead agency after consultation with the community and consensus

[3] 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

[4] These indicators are for guidance only and do not affect the overall benchmarking evaluation

[5] Primary assessed impacts on air quality are emissions due to electricity consumption, vehicular transport, industrial processes and mining. The levels 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

[6] Assessed for the lead agency only

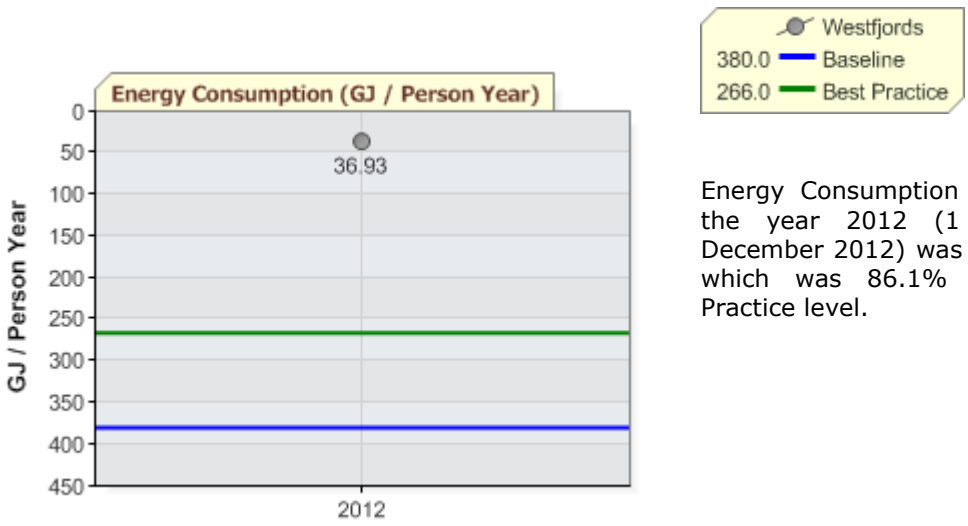
COMMUNITY PERFORMANCE BENCHMARKS

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

1. Policy ★

2. Energy

Energy Consumption (GJ / Person Year) ★

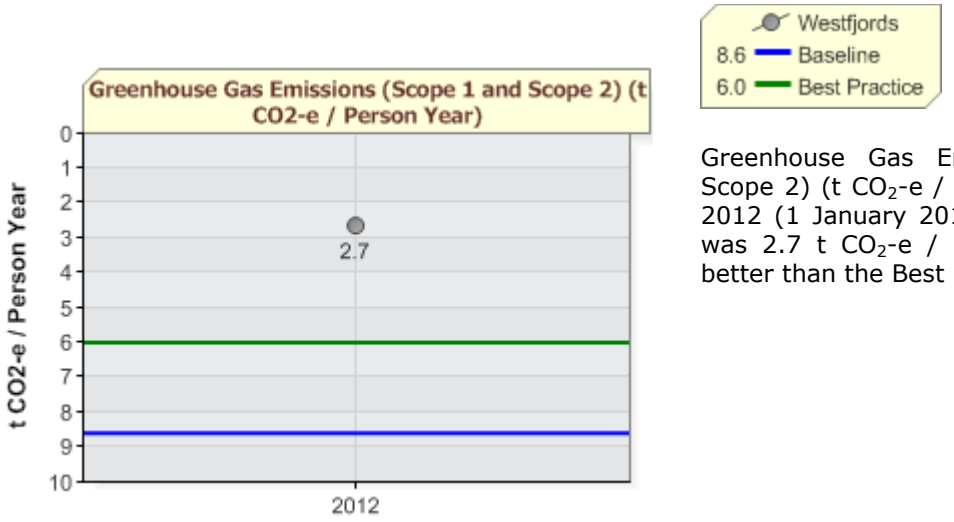


Energy Consumption (GJ / Person Year) for the year 2012 (1 January 2012 – 31 December 2012) was 36.93 GJ / Person Year, which was 86.1% better than the Best Practice level.

Green Power (%)

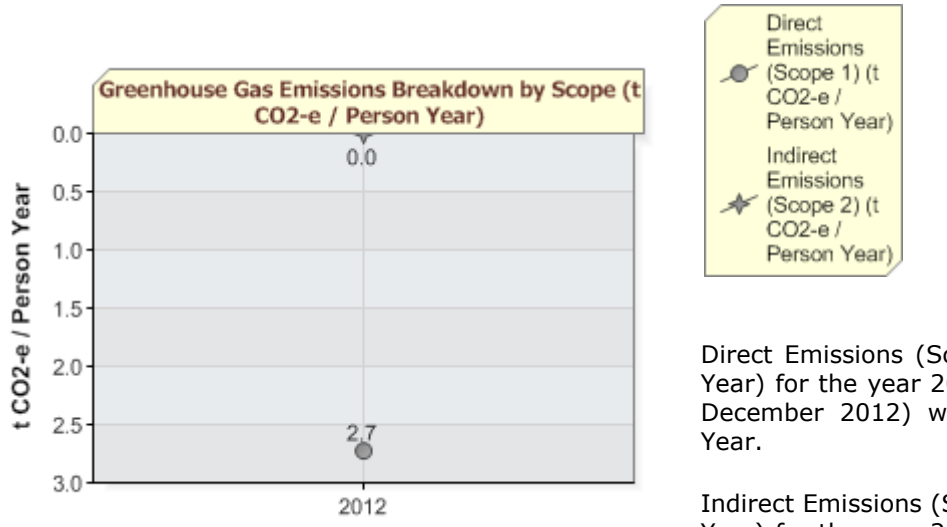
N/A

Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO_2-e / Person Year) ★



Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO_2-e / Person Year) for the year 2012 (1 January 2012 – 31 December 2012) was 2.7 t CO_2-e / Person Year, was 55.0% better than the Best Practice level.

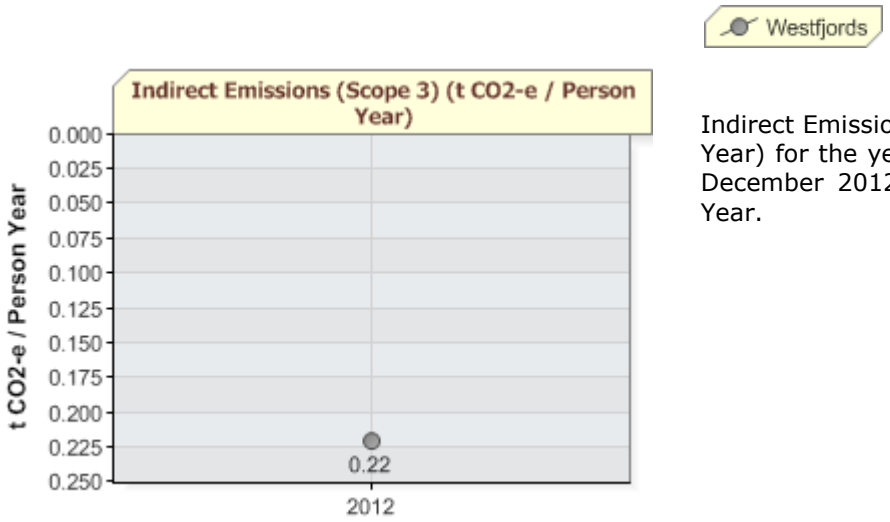
Greenhouse Gas Emissions Breakdown by Scope (t CO_2-e / Person Year)



Direct Emissions (Scope 1) (t CO_2-e / Person Year) for the year 2012 (1 January 2012 – 31 December 2012) was 2.7 t CO_2-e / Person Year.

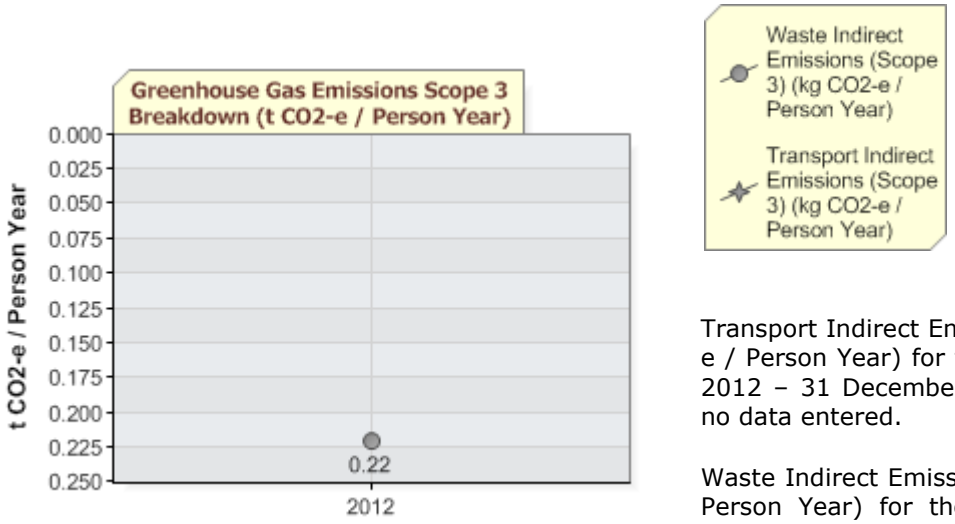
Indirect Emissions (Scope 2) (t CO_2-e / Person Year) for the year 2012 (1 January 2012 – 31 December 2012) was 0.0 t CO_2-e / Person Year.

Indirect Emissions (Scope 3) (t CO_2-e / Person Year)



Indirect Emissions (Scope 3) (t CO_2-e / Person Year) for the year 2012 (1 January 2012 – 31 December 2012) was 0.22 t CO_2-e / Person Year.

Greenhouse Gas Emissions Scope 3 Breakdown (t CO_2-e / Person Year)



Transport Indirect Emissions (Scope 3) (t CO_2-e / Person Year) for the year 2012 (1 January 2012 – 31 December 2012) not measured as no data entered.

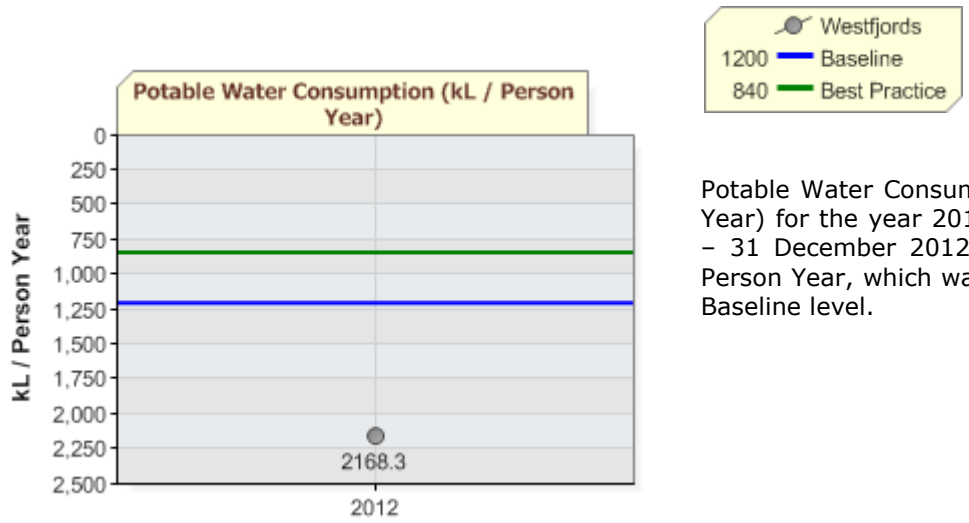
Waste Indirect Emissions (Scope 3) (t CO_2-e / Person Year) for the year 2012 (1 January 2012 – 31 December 2012) was 0.22 t CO_2-e / Person Year.

Direct Emissions (Scope 1)							
Stationary Fuel Combustion							
2012							
Type	**Quantity**	**Unit**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
Diesel	311818	litres (L)	11343315.2	840.5	2.4	2.1	845.0
		subtotal	11343315.2	840.5	2.4	2.1	845.0
Mobile Fuel Combustion (road)							
2012							
Type	**Quantity**	**Unit**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
Motor gasoline	2481441	litres (L)	80829938.0	5601.5	42.4	200.5	5844.4
Diesel	4962884	litres (L)	180539794.2	13378.0	14.8	218.3	13611.1
		subtotal	261369732.2	18979.5	57.2	418.7	19455.5
		TOTAL	**272713047.4**	**19820.1**	**59.6**	**420.8**	**20300.5**
Indirect Emissions (Scope 2)							
Purchased Electricity							
2012							
Quantity	**Unit**	**% Green Power**	**Provider**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
222954	Kilowatt hour (kWh)	N/A*	Iceland	802634.4	-	-	-	-
			subtotal	802634.4	-	-	-	-
			TOTAL	**802634.4**	**-**	**-**	**-**	**-**
Greenhouse Gas Emissions (Scope 1 and Scope 2)							
			GRAND TOTAL	**273515681.8**	**19820.1**	**59.6**	**420.8**	**20300.5**
Indirect Emissions (Scope 3)							
Waste Sent to Landfill							
2012							
Quantity	**Unit**	**Type of Landfill**	**Type of Waste**	**Type of Operation**	**Source**	**CO_2 Emission Estimate (t CO_2-e)**	**CH_4 Emission Estimate (t CO_2-e)**	**N_2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t CO_2-e)**
1559.53	tonnes (compacted)	Covered and/or managed waste treatment facility	Other inert	Other Operation	International	-	-	-	-
1641750	kilograms (uncompacted)	Covered and/or managed waste treatment facility	Unknown	Other Operation	International	-	1641.8	-	1641.8
					subtotal	-	1641.8	-	1641.8
					TOTAL	**-**	**1641.8**	**-**	**1641.8**

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

3. Water

Potable Water Consumption (kL / Person Year)

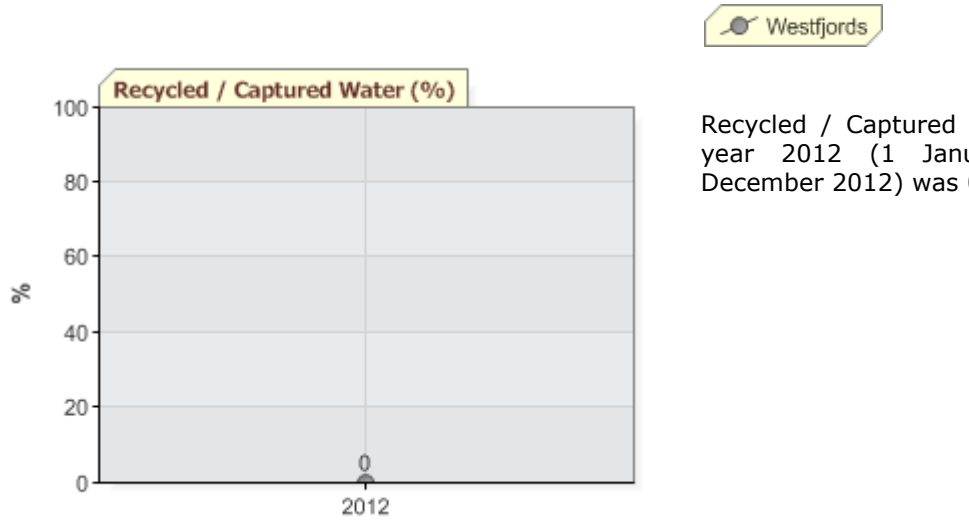


Potable Water Consumption (kL / Person Year) for the year 2012 (1 January 2012 – 31 December 2012) was 2168.3 kL / Person Year, which was 80.7% below the Baseline level.

2012

Quantity	Unit	Potable Water Consumption (kL)
16058762	cubic metres	16058762.0 kL
	TOTAL	**16058762.0 kL**

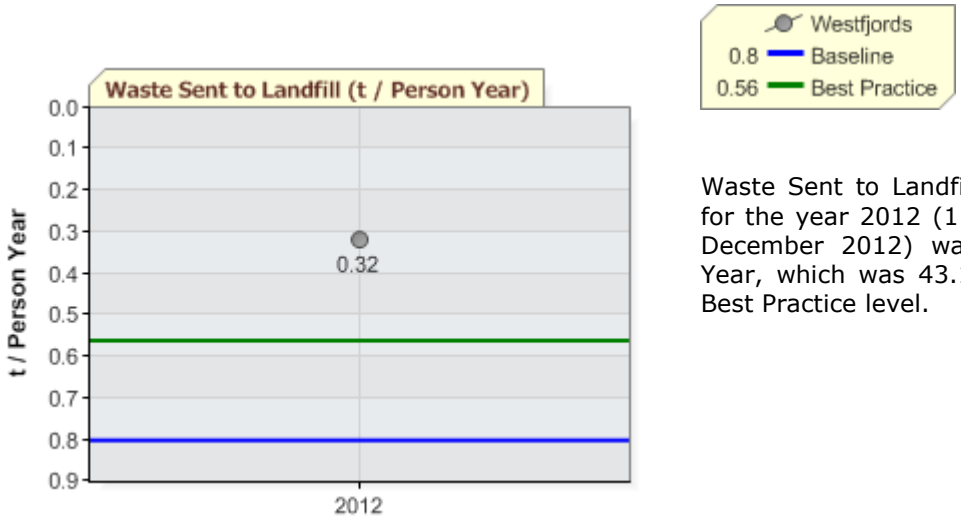
Recycled / Captured Water (%)



Recycled / Captured Water (%) for the year 2012 (1 January 2012 – 31 December 2012) was 0%.

4. Waste

Waste Sent to Landfill (t / Person Year)

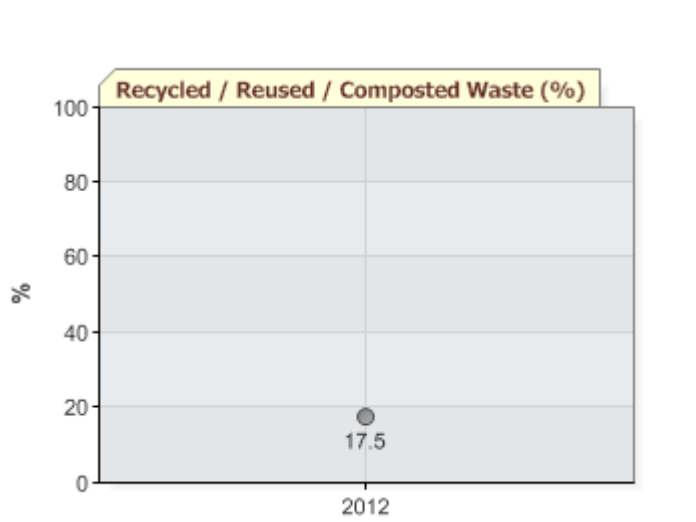


Waste Sent to Landfill (t / Person Year) for the year 2012 (1 January 2012 – 31 December 2012) was 0.32 t / Person Year, which was 43.1% better than the Best Practice level.

2012

Quantity	Unit	Type of Landfill	Type of Waste	Type of Operation	Waste Sent to Landfill (t)
1559.53	tonnes (compacted)	Covered and/or managed waste treatment facility	Other inert	Other Operation	719.79 t
1641750	kilograms (uncompacted)	Covered and/or managed waste treatment facility	Unknown	Other Operation	1641.75 t
				TOTAL	**2361.54 t**

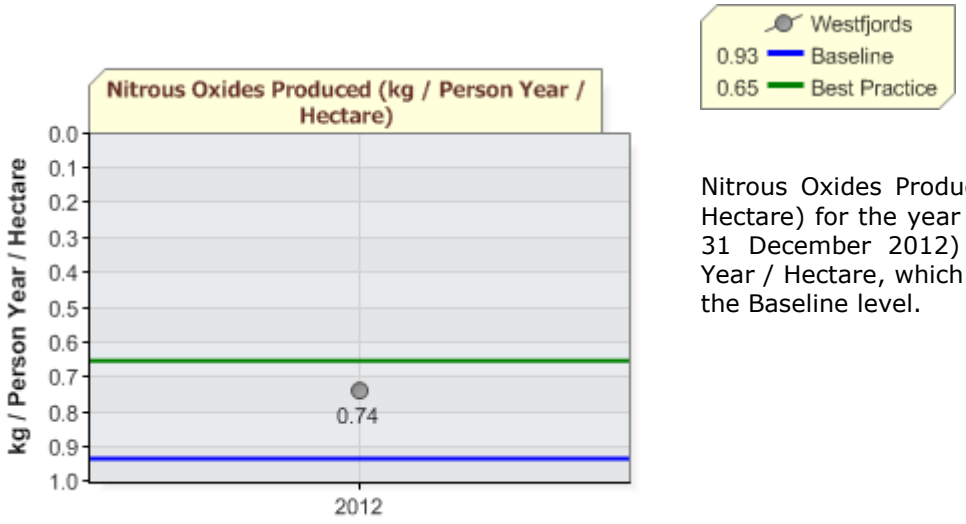
Recycled / Reused / Composted Waste (%)



Recycled / Reused / Composted Waste (%) for the year 2012 (1 January 2012 – 31 December 2012) was 17.5%.

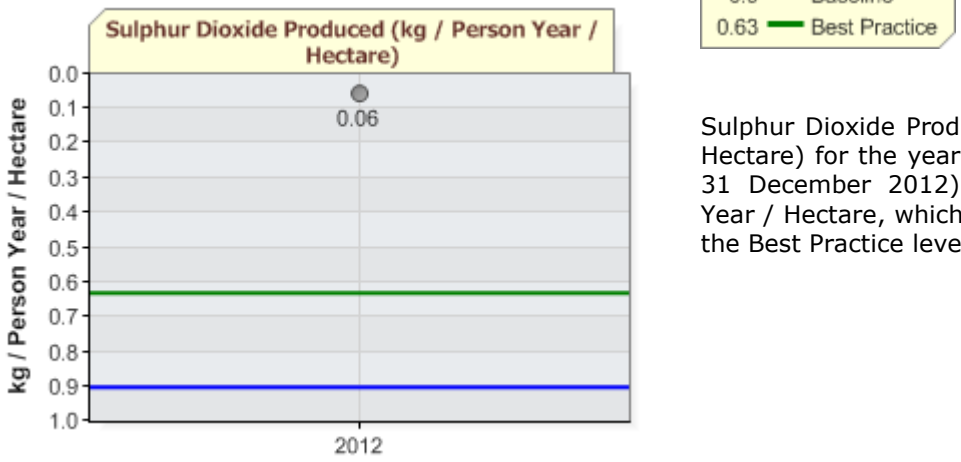
5. Sector Specific

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



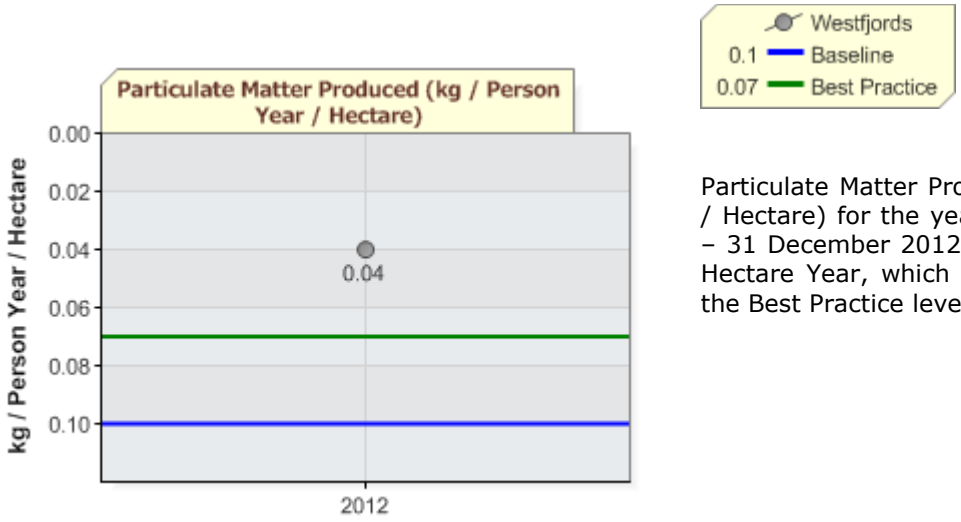
Nitrous Oxides Produced (kg / Person Year / Hectare) for the year 2012 (1 January 2012 – 31 December 2012) was 0.74 kg / Person Year / Hectare, which was 20.43% better than the Baseline level.

Sulphur Dioxide Produced (kg / Person Year / Hectare) ★



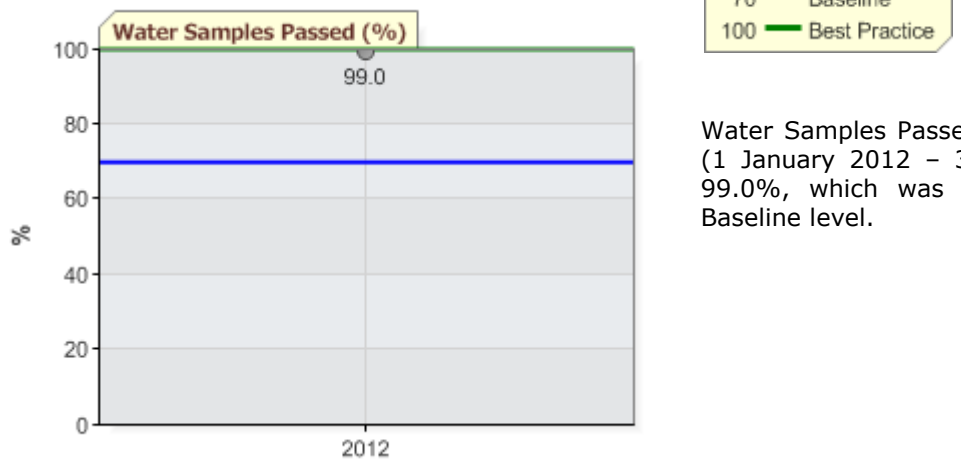
Sulphur Dioxide Produced (kg / Person Year / Hectare) for the year 2012 (1 January 2012 – 31 December 2012) was 0.06 kg / Person Year / Hectare, which was 90.48% better than the Best Practice level.

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



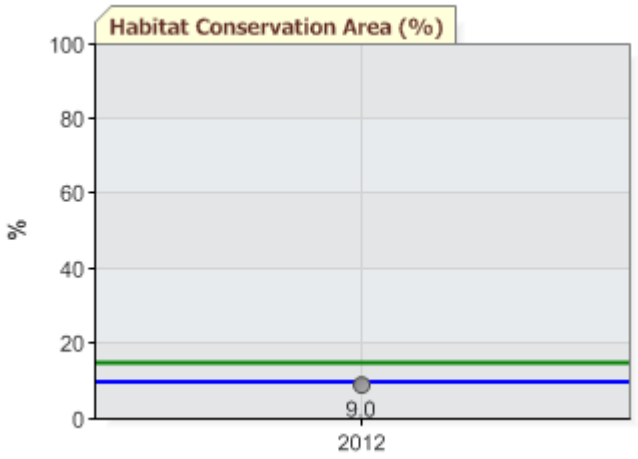
Particulate Matter Produced (kg / Person Year / Hectare) for the year 2012 (1 January 2012 – 31 December 2012) was 0.04 kg / Person / Hectare Year, which was 42.86% better than the Best Practice level.

Water Samples Passed (%) ✓



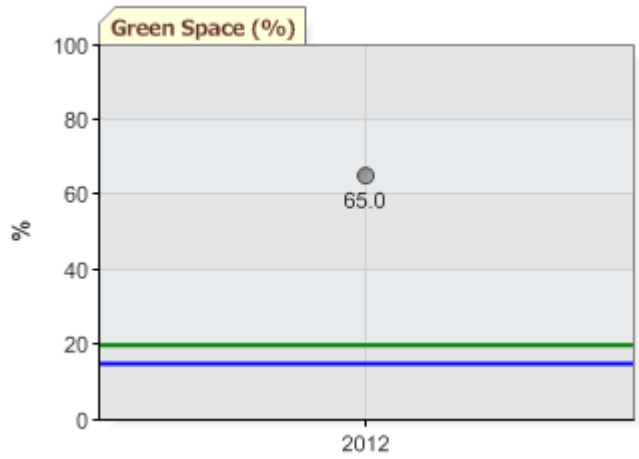
Water Samples Passed (%) for the year 2012 (1 January 2012 – 31 December 2012) was 99.0%, which was 29.0% better than the Baseline level.

Habitat Conservation Area (%) ✘



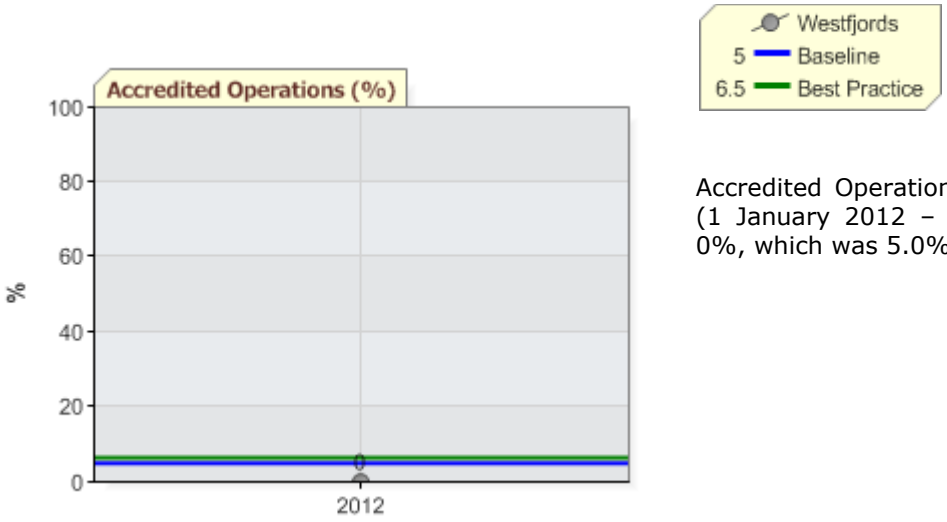
Habitat Conservation Area (%) for the year 2012 (1 January 2012 – 31 December 2012) was 9.0%, which was 10.0% below the Baseline level.

Green Space (%) ★



Green Space (%) for the year 2012 (1 January 2012 – 31 December 2012) was 65.0%, which was 45.0% better than the Best Practice level.

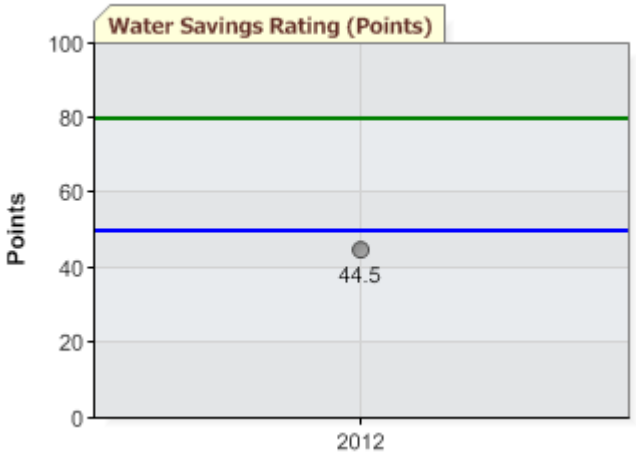
Accredited Operations (%) ✘



Accredited Operations (%) for the year 2012 (1 January 2012 – 31 December 2012) was 0%, which was 5.0% below the Baseline level.

6. Lead Agency Performance

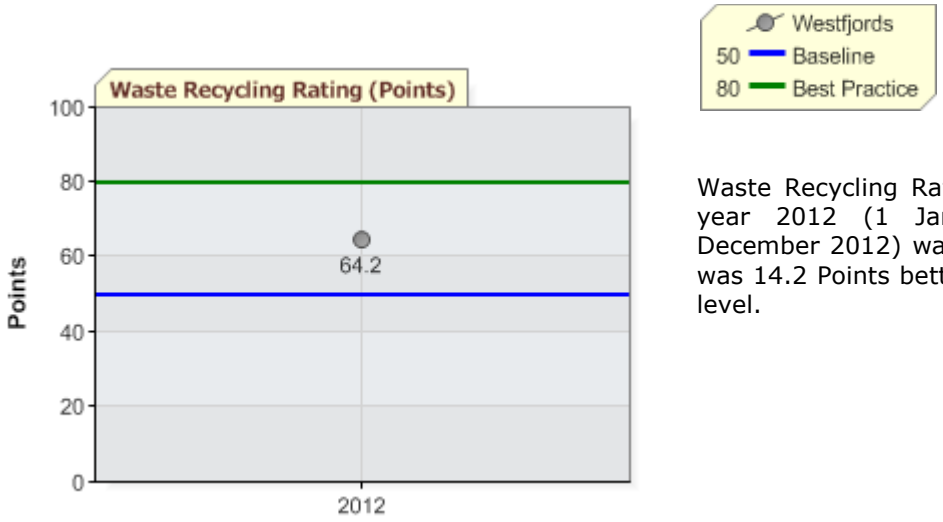
Water Savings Rating (Points)



Water Savings Rating (Points) for the year 2012 (1 January 2012 – 31 December 2012) was 44.5 Points, which was 5.5 Points below the Baseline level.

Water Savings Measures	Frequency / Percentage Rating	Water Savings Rating (Points)
Check for leaks	Not Relevant / Not Available	-
Low/dual flush toilets	80-99%	88.9 Points
Low flow tap fittings	Not Relevant / Available	-
Low flow shower fittings	Not Relevant / Not Available	-
Water sprinklers used after dark	0%	0.0 Points
Minimal irrigation landscaping	Not Relevant / Available	-
Use of recycle/grey/rain water	Not Relevant / Available	-
	Overall Rating:	**44.5 Points**

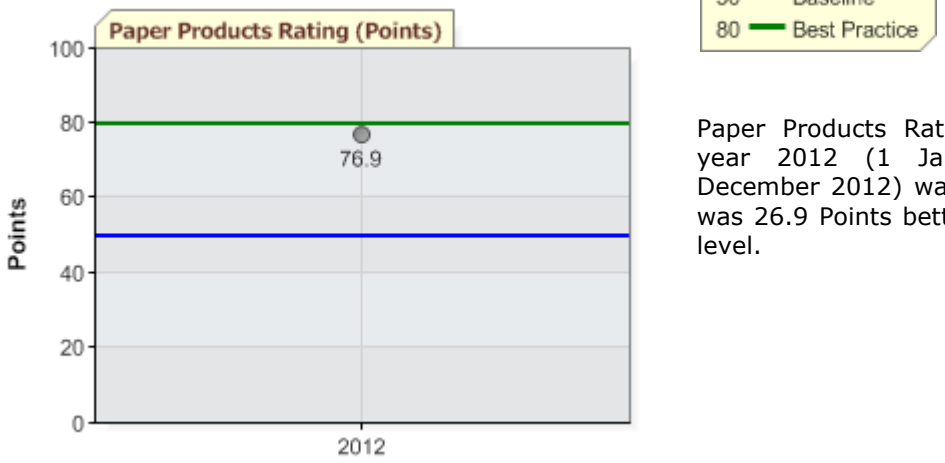
Waste Recycling Rating (Points) ✓



Waste Recycling Rating (Points) for the year 2012 (1 January 2012 – 31 December 2012) was 64.2 Points, which was 14.2 Points better than the Baseline level.

Waste Recycling Measures	Frequency / Percentage Rating	Waste Recycling Rating (Points)
Glass	0%	0.0 Points
Paper/card	60-79%	73.9 Points
Iron & steel (ferrous metals)	80-99%	88.9 Points
Other metals (non-ferrous)	80-99%	88.9 Points
Plastics	40-59%	65.1 Points
Rubber	60-79%	73.9 Points
Green waste	20-39%	58.8 Points
	Overall Rating:	**64.2 Points**

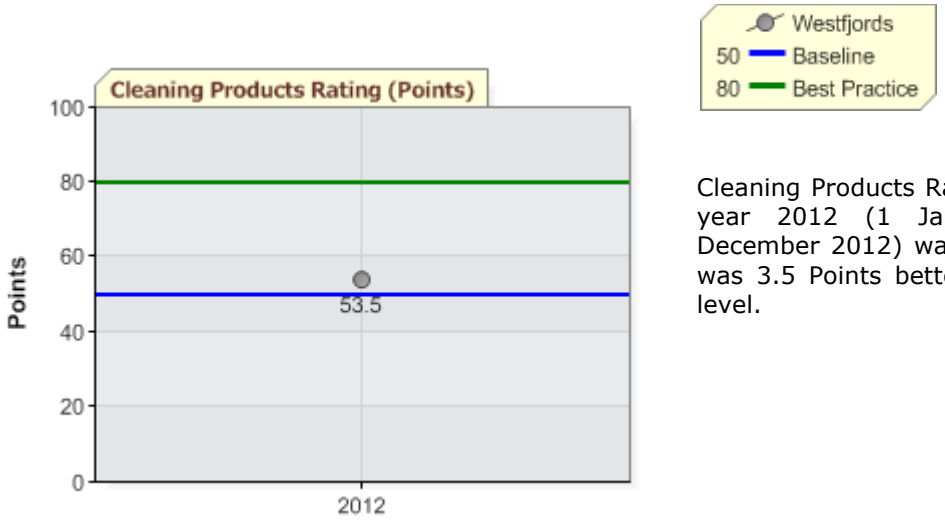
Paper Products Rating (Points)



Paper Products Rating (Points) for the year 2012 (1 January 2012 – 31 December 2012) was 76.9 Points, which was 26.9 Points better than the Baseline level.

Paper Products Measures	Frequency / Percentage Rating	Paper Products Rating (Points)
Office paper	60-79%	73.9 Points
Serviettes	60-79%	73.9 Points
Tissues	60-79%	73.9 Points
Toilet tissue	80-99%	88.9 Points
Paper towels	60-79%	73.9 Points
	Overall Rating:	**76.9 Points**

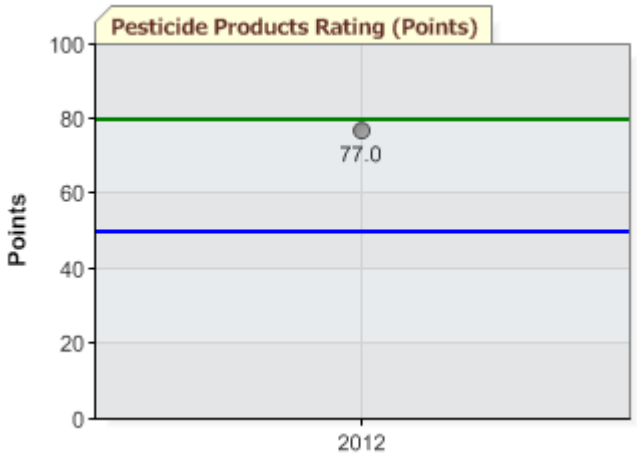
Cleaning Products Rating (Points) ✓



Cleaning Products Rating (Points) for the year 2012 (1 January 2012 – 31 December 2012) was 53.5 Points, which was 3.5 Points better than the Baseline level.

Cleaning Products Measures	Frequency / Percentage Rating	Cleaning Products Rating (Points)
Hard floor cleaners	1-19%	54.0 Points
Carpet cleaners	0%	0.0 Points
Interior surface cleaners	Not Relevant / Available	100.0 Points
External surface cleaners	1-19%	54.0 Points
Glass cleaners	1-19%	54.0 Points
Detergents	1-19%	54.0 Points
Personal hygiene	20-39%	58.8 Points
	Overall Rating:	**53.5 Points**

Pesticide Products Rating (Points)



Pesticide Products Rating (Points) for the year 2012 (1 January 2012 – 31 December 2012) was 77.0 Points, which was 27.0 Points better than the Baseline level.

Pesticide Products Measures	Frequency / Percentage Rating	Pesticide Products Rating (Points)
Weed killers	1-19%	54.0 Points
Fungal killers	1-19%	54.0 Points
Rodent killers	Not Relevant / Available	100.0 Points
Insect killers	Not Relevant / Available	100.0 Points
	Overall Rating:	**77.0 Points**

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

Conclusion And Recommendations

Congratulations, **Westfjords** has met the requirements to be recognised as an EarthCheck Benchmarked Community.

In addition to having a Sustainability Policy in place, twelve of the assessed EarthCheck indicators are at or above the Baseline level. From the benchmarking data provided, six indicators, *Energy Consumption, Greenhouse Gas Emissions (Scope 1 and Scope 2), Waste Sent to Landfill, Sulphur Dioxide Produced, Particulate Matter Produced* and *Green Space,* are at or above the Best Practice level.

The four indicators that fell below the Baseline level were *Potable Water Consumption, Water Savings Rating, Habitat Conservation Area, and Accredited Operations*.

The value for Water Consumption was 80.7% below the Baseline level and the value for Water Saving was 5.5 Points below the Baseline level. **Westfjords** are encouraged, therefore, to review current on-site water use and the possibility of increasing on-site recycling and reuse (e.g. using non-hazardous rain water and/or grey water for watering plants and washing exterior surfaces). **Westfjords** are also encouraged to regularly check for possible leaks, and fitting (where appropriate) water saving devices such as low-flow shower heads and dual flush toilet cisterns.

The value for Habitat Conservation Area was 10.0% below the Baseline Level. **Westfjords** is encouraged to promote habitat conservation of land, wetlands and waterways to aid biodiversity conservation and support habitat protection within the region.

The value for Accredited Operations was 5.0% below the Baseline Level. **Westfjords** is encouraged to promote environmental accreditation to hotels, restaurants and other business within the community.

Westfjords is encouraged to continue to make improvements in the above indicators and to ensure that any indicators below baseline are addressed in the organisation's risk assessment and long term sustainability approach.

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 **Westfjords** 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, **Westfjords** is encouraged to ensure that Potable Water Consumption, Water Savings Rating, Habitat Conservation Area, and Accredited Operations are at Baseline performance or better. In line with EarthCheck Policy this would enable **Westfjords** to continue to meet the benchmarking requirements of the EarthCheck program.

APPENDIX

SUBMISSION COMMENTS

The following comments were provided at time of submission:

Water - In many communities in the Westfjords the real water consumption is not measured. The water that goes from the source is measured but not all of it is used and the overflow goes to the sea. That is why it looks like the water consumption is more than it really is.

Energy - In the Westfjords there are seven hydroelectric power plants and all electricity that is used in the Westfjords is produced there. The only exception is if there is a power failure, the emergency power generator is powered with oil, also the Island Flatey only uses oil to powers up generator to produce electricity all year around.

Mobile Fuel Combustion (Road) - The method used in this sector is information obtained from the Road Traffic Directorate in Iceland about total car ownership in Iceland. Number of vehicles was multiplied with the amount of fuel usage in Iceland the year 2012 (information obtained from Orkusetur). By doing this the average fuel consumption for cars in Iceland was obtained. Information about total cars in the Westfjords was obtained from The Road Traffic Directorate in Iceland and multiplied by the average usage of fuel. It is clear that by doing this we are not getting the best results for Mobile Fuel Combustion since we do not have information about the kilometers driven each year. But because of the limited information available this was considered the best method.

CO2-e, Nitrous Oxides, Sulphur Dioxide Produced or Particulate Matter is not measured in the Westfjords

In the Westfjords there are mostly deep fjords with tall mountains. Therefore there is not a lot of lowland. Here below are pictures that show example of inhabited area (pic.2 in the Westfjords shows where the protected area is.

Picture 1 Protected areas in Westfjords

Picture 2. Isafjordur –example of inhabited area in Westfjords

Picture 3- Division of community in Westfjords

ACTIVITY MEASURE

The Benchmarking Assessors sought clarification with regards to the *Person Years*, as the figure of 2012 *Person Years* was initially submitted.

The **Westfjords** advised;

> *"I have the information's about Persons Years*
> *It is : 7025 + (3.738.511 / 365) +29.523,222 /(3*365) =* ***442,2934,247***"

Based on the figures provided above, the Benchmarking Assessors calculated the figure of 44229.3 *Person Years*, as per below;

Person Years = Total Community Residents + (Total No. of Overnight Visitor Stays ÷ 365) + (Total No. of Day Visitors ÷ (3 x 365)
= 7 025 + (3 738 511 ÷ 365) + (29 523 222 ÷ (3 x 365))
= 7 025 + 10 242.5 + 26 961.8
= 44 229.3 Person Years

However as this figure was different to the figure calculated by the **Westfjords**, further clarification was sought.

The **Westfjords** advised;

> *"No this is not correct.*
> *Sorry*
> *Here is the correct number for Person Years*
> *7.025 +(129.229/ 365) + (29.522 / (3x365)) = 7406,011"*

The Benchmarking Assessors have therefore updated the *Person Years* to 7406 as per the figures provided above, this figure has been used throughout the Benchmarking Assessment.

ENERGY CONSUMPTION

The Benchmarking Assessors sought clarification with regards to the *Energy Consumption*, as it was noted in the 'Additional Information' provided that an emergency generator was powered with oil and that the Island Flatey used oil generators to produce electricity all year round (as per below), however no oil was initially submitted.

> *"Energy - In the Westfjords there are seven hydroelectric power plants and all electricity that is used in the Westfjords is produced there. The only exception is if there is a power failure, the emergency power generator is powered with oil, also the Island Flatey only uses oil to powers up generator to produce electricity all year around."*

The **Westfjords** advised;

> *"I have gotten the total figure for Fuel Combustion to power up the generator. The Oil consumptions the year 2012 was 311.818 liters.*
>
> *Could you please put that in so the energy consumption will be correct."*

The Benchmarking Assessors sought further clarification with regards to the type of oil used to power the generators, so that the figure of 311 818 Litres could be input to the system correctly.

The **Westfjords** advised;

> *"They use two kind of oil for the generator´s, marine diesel oil and engine oil. I do not know how it divides for the year."*

As the **Westfjords** was not able to determine the quantity of 'oil' used that was *marine diesel oil* and that which was *engine oil*, the Benchmarking Assessors submitted 'Diesel' both. However for future Benchmarking Assessments, the **Westfjords** should aim to monitor the quantity of each fuel type being used for all generators so that a more accurate *Energy Consumption* is included in the Benchmarking Reports.

The Benchmarking Assessors sought further clarification as no *Diesel* was initially submitted for *Mobile Fuel Combustion*, only *Motor gasoline* was submitted.

The **Westfjords** advised;

> *"This is the division*
> *Motor gasoline – 2.481,441 l*
> *Diesel - 4.962.884 l"*

The Benchmarking Assessors updated the *Energy Consumption* as per below;

Stationary Fuel Combustion

Type	Quantity	Unit	Energy Consumption (MJ)
Diesel	311818	litres (L)	11343315.2

Mobile Fuel Combustion

Type	Quantity	Unit	Energy Consumption (MJ)
Motor gasoline	2481441	litres (L)	80829938.0
Diesel	4962884	litres (L)	180539794.2

Purchased Electricity

Quantity	Unit	% Green Power	Provider	Energy Consumption (MJ)
222954	Kilowatt hour (kWh)	N/A*	Iceland	802634.4

These sources produced a total of 273 515.68 GJ which equates to 36.93 GJ per *Person Year.*

POTABLE WATER CONSUMPTION

The Benchmarking Assessors sought clarification with regards to the *Potable Water Consumption* as the figure of 16 058 762 m^3 initially submitted remained significantly greater than expected.

The **Westfjords** advised;

> *"I confirm that the numbers for the water consumptions that I sent to you are correct. As I explained in earlier e-mail this is not actual usage, because some of the Municipality do not measure the actual usage, only the flow from the source. The water who is not used goes on overflow to the sea.*
> *I hope to have better measurements for the water usage for the year 2014."*

This equates to 2 168.3 kL per *Person Year*.

AIR QUALITY

The Benchmarking Assessors have calculated *Air Quality* based on the submitted energy sources;

2012

Nitrous Oxides Produced:	174 424.56 kg
Sulphur Dioxide Produced:	14 327.91 kg
Particulate Matter Produced:	8 972.65 kg

Benchmarks Assessed by EarthCheck

Summary Of Supplied Benchmarking Data

Activity Measures

Person Years	7406
Total Community Area	881391.92

Supplied Benchmarking Data

Energy

Energy Consumption (GJ / Person Year)

Supplied	273515.68 GJ
Calculated	36.93 GJ / Person Year
Baseline	380 GJ / Person Year
Best Practice	266 GJ / Person Year
Difference	86.1% better than the Best Practice level

Green Power (%)

Supplied	N/A
Calculated	N/A

Greenhouse Gas Emissions (Scope 1 and Scope 2) (t CO_2-e / Person Year)

Supplied	20300.5 t CO2-e
Calculated	2.7 t CO2-e / Person Year
Baseline	8.6 t CO_2-e / Person Year
Best Practice	6.0 t CO_2-e / Person Year
Difference	55 % better than the Best Practice level

Direct Emissions (Scope 1) (t CO_2-e / Person Year)

Supplied	20300.5 t CO2-e
Calculated	2.7 t CO2-e / Person Year

Indirect Emissions (Scope 2) (t CO_2-e / Person Year)

Supplied	0.0 t CO_2-e
Calculated	0.0 t CO_2-e / Person Year

Indirect Emissions (Scope 3) (t CO_2-e / Person Year)

Supplied	1641.75 t CO_2-e
Calculated	0.22 t CO_2-e / Person Year

Transport Indirect Emissions (Scope 3) (t CO_2-e / Person Year)

Supplied	0.0 t CO_2-e
Calculated	0.0 t CO_2-e / Person Year

Waste Indirect Emissions (Scope 3) (t CO_2-e / Person Year)

Supplied	1641.75 t CO_2-e
Calculated	0.22 t CO_2-e / Person Year

Water

Potable Water Consumption (kL / Person Year)

Supplied	16058762.0 kL
Calculated	2168.3 kL / Person Year
Baseline	1200 kL / Person Year
Best Practice	840 kL / Person Year
Difference	80.7% below the Baseline level

Recycled / Captured Water (%)

Supplied	0%
Calculated	0%

Water Savings Rating (Points)

Supplied	44.5 Points
Calculated	44.5 Points
Baseline	50 Points
Best Practice	80 Points
Difference	5.5 Points below the Baseline level

Waste

Waste Sent to Landfill (t / Person Year)

Supplied	2361.54 t
Calculated	0.32 t / Person Year
Baseline	0.8 t / Person Year
Best Practice	0.56 t / Person Year
Difference	43.1% better than the Best Practice level

Recycled / Reused / Composted Waste (%)

Supplied	17.5%
Calculated	17.5%

Waste Recycling Rating (Points)

Supplied	64.2 Points
Calculated	64.2 Points

Baseline	50 Points
Best Practice	80 Points
Difference	14.2 Points better than the Baseline level

Paper

Paper Products Rating (Points)

Supplied	76.9 Points
Calculated	76.9 Points
Baseline	50 Points
Best Practice	80 Points
Difference	26.9 Points better than the Baseline level

Cleaning

Cleaning Products Rating (Points)

Supplied	53.5 Points
Calculated	53.5 Points
Baseline	50 Points
Best Practice	80 Points
Difference	3.5 Points better than the Baseline level

Pesticides

Pesticide Products Rating (Points)

Supplied	77.0 Points
Calculated	77.0 Points
Baseline	50 Points
Best Practice	80 Points
Difference	27.0 Points better than the Baseline level

Sector Specific

Nitrous Oxides Produced (kg / Person Year / Hectare)

Supplied	174 424.56 kg
Calculated	0.74 kg / Person Year / Hectare
Baseline	0.93 kg / Person Year / Hectare
Best Practice	0.65 kg / Person Year / Hectare
Difference	20.43 % better than the Baseline level

Sulphur Dioxide Produced (kg / Person Year / Hectare)

Supplied	14 327.91 kg
Calculated	0.06 kg / Person Year / Hectare
Baseline	0.9 kg / Person Year / Hectare
Best Practice	0.63 kg / Person Year / Hectare
Difference	90.48 % better than the Baseline level

Particulate Matter Produced (kg / Person Year / Hectare)

Supplied	8 972.65 kg
Calculated	0.04 kg / Person Year / Hectare
Baseline	0.1 kg / Person Year / Hectare
Best Practice	0.07 kg / Person Year / Hectare
Difference	42.86 % better than the Baseline level

Water Samples Passed (%)

Supplied	99.0%
Calculated	99.0%
Baseline	70 %
Best Practice	100 %
Difference	29.0% better than the Baseline level

Habitat Conservation Area (%)

Supplied	9.0%
Calculated	9.0%
Baseline	10 %
Best Practice	15 %
Difference	10.0% below the Baseline level

Green Space (%)

Supplied	65.0%
Calculated	65.0%
Baseline	15 %
Best Practice	20 %
Difference	45.0% better than the Best Practice level

Accredited Operations (%)

Supplied	0%
Calculated	0%
Baseline	5 %
Best Practice	6.5 %
Difference	5.0% 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^3) or litres (L)). These are: 1 kg (uncompacted waste) = 0.00333333 m^3 or 3.33333 L and 1 kg (compacted waste) = 0.00153846 m^3 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).