EARTHCHECK

BENCHMARKING ASSESSMENT REPORT

AIRPORT BENCHMARKING

AUCKLAND INTERNATIONAL AIRPORT (REVISED)
AUCKLAND, NEW ZEALAND

REPORT DATE: 17 December 2010

Benchmarking Data Collection Period: 1 July 2009 – 30 June 2010

The planet deserves more than half measures

OVERVIEW

This annual assessment of **Auckland International Airport** 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. Their outcomes which are presented in this report are used by EarthCheck to evaluate whether the operation has reached the standards necessary to pass the benchmarking requirements, as stated in the EarthCheck Benchmarking Policy. [2]

		Indicator Measure (Benchmark)
1	Policy	Policy is produced and in place
2	Energy	Energy Consumption (MJ / Square Metre) Greenhouse Gas Emissions (Scope 1 and Scope 2) (kg CO_2-e / Square Metre) Green Power (%)[3]
3	Water	Potable Water Consumption (L / Passenger) Water Savings Rating (Points) Recycled / Captured Water (%)[3]
4	Waste	Waste Sent to Landfill (L / Passenger) Waste Recycling Rating (Points) Recycled / Reused / Composted Waste (%)[3]
5	Community	Community Commitment (%) Community Contributions Rating (Points)
6	Paper	Paper Products Rating (Points)
7	Cleaning	Cleaning Products Rating (Points)
8	Pesticides	Pesticide Products Rating (Points)
9	Sector Specific	Water Samples Passed (%) Proven Noise Infringements (%)

[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] To meet the requirements stipulated in the EarthCheck Company Standard, the benchmarks for all the submitted EarthCheck indicators need to be at, or better than, the Baseline level. Baseline and Best Practice performance levels are set with reference to the type of activity (registered sector/s) and appropriate national and international data which take into account social, geographical and climatic impacts.

First-time benchmarking operations that fail to meet the minimum requirements (Baseline performance or better) for up to two submitted EarthCheck indicators (with a third indicator within 10% of the Baseline level), will be permitted to pass benchmarking. The operation 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 the operation (e.g., occurrence of a natural disaster), then the right to use the appropriate EarthCheck 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 meet the requirements of the Company Standard. 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.

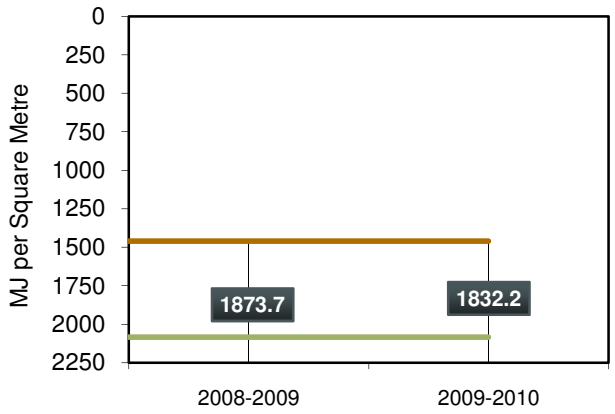
[3] These indicators are for guidance only and do not affect the overall benchmarking evaluation.

AIRPORT PERFORMANCE BENCHMARKS

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

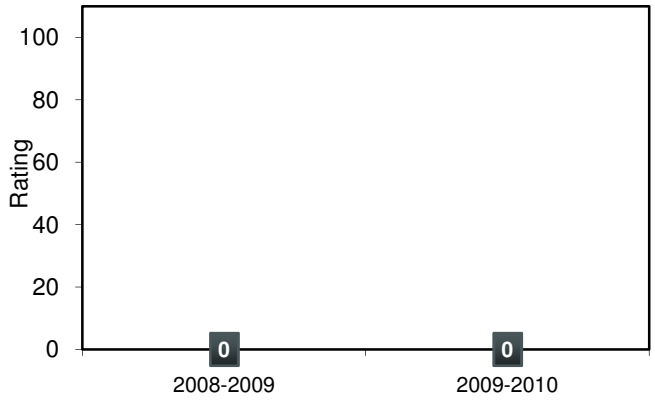
1. Policy ★
2. Energy Consumption

Energy consumed (MJ / Square Metre) ✓



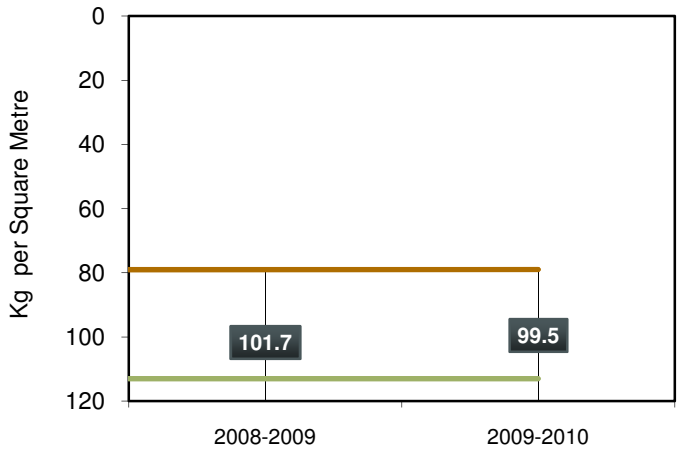
The **Auckland International Airport** consumed 1 832.2MJ per Square Metre for the year 2009-2010 (1 July 2009 – 30 June 2010), which was 12.1% better than the Baseline Level.

Green Power



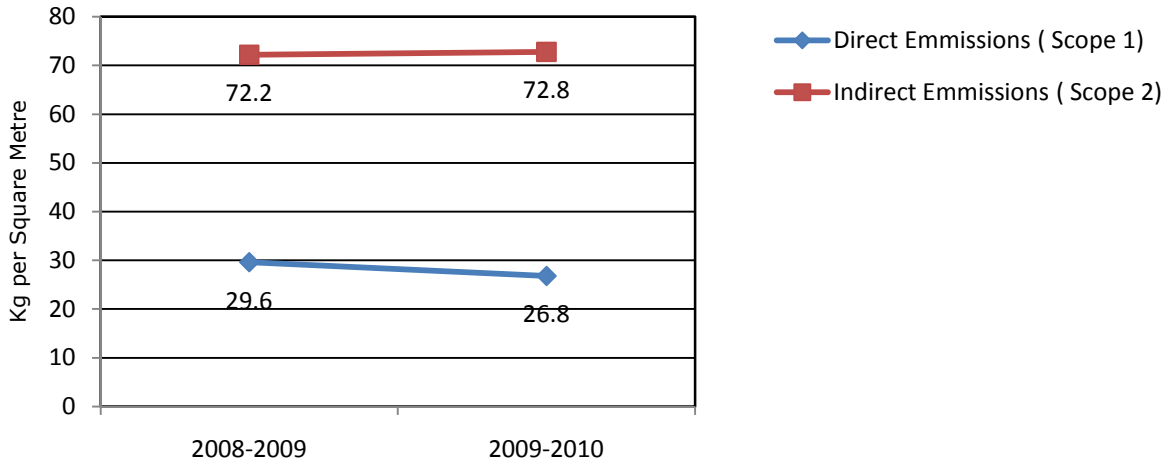
Green Power (%) for the year 2009 - 2010 (1 July 2009– 30 June 2010) was 0%.

Greenhouse Gas Emissions (Scope 1 and Scope 2) (kg / Square Metre)



Carbon Dioxide (kg / Square Metre) for the year 2009- 2010 (1 July 2009 – 30 June 2010) was 99.5 kg / Square Metre, which was 11.9% better than the Baseline level.

Greenhouse Gas Emissions Breakdown by Scope (Kg / Square Metre)



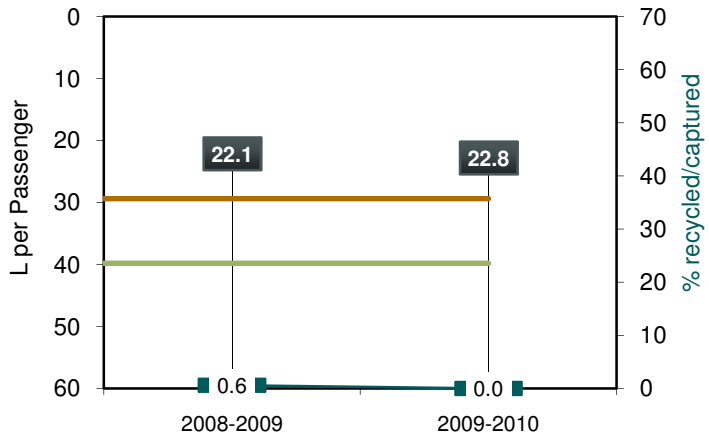
Direct Emissions (Scope 1)							
Stationary Fuel Combustion							
Type	**Quantity**	**Unit**	**Energy Consumption**	**CO_2 Emission Estimate (t**	**CH4 Emission Estimate (t**	**N2O Emission Estimate (t CO_2-**	**Total Emission**
Natural gas	38701000	MJ	38701000.0	2015.2	1.0	1.1	2017.3
		subtotal	38701000.0	2015.2	1.0	1.1	2017.3
Mobile Fuel Combustion (road)							
Diesel	113852	litres (L)	4361670.1	299.6	0.3	5.0	305.0
Motor gasoline	52609	litres (L)	1834475.8	120.5	0.7	0.8	122.1
		subtotal	6196145.9	420.2	1.1	5.8	427.1
Mobile Fuel Combustion (air)							
Jet Kerosene	30065	litres (L)	1117215.4	75.6	0.05	0.7	76.3
		subtotal	1117215.4	75.6	0.05	0.7	76.3
		TOTAL	**46014361.3**	**2511.0**	**2.1**	**7.6**	**2520.7**

Indirect Emissions (Scope 2)								
Purchased Electricity								
Quantity	**Unit**	**% Green Power**	**Provider**	**Energy Consumption (MJ)**	**CO_2 Emission Estimate (t CO_2-e)**	**CH4 Emission Estimate (t CO_2-e)**	**N2O Emission Estimate (t CO_2-e)**	**Total Emission Estimate (t**
35171122	Kilowatt hour (kWh)	0	New Zealand	126616039.2	-	-	-	6858.4
			subtotal	126616039.2	-	-	-	6858.4
			TOTAL	**126616039.2**	**-**	**-**	**-**	**6858.4**

Greenhouse Gas Emissions (Scope 1 and Scope 2)					
GRAND TOTAL	**172630400.5**	**2511.0**	**2.1**	**7.6**	**9379**

3. Water Consumption

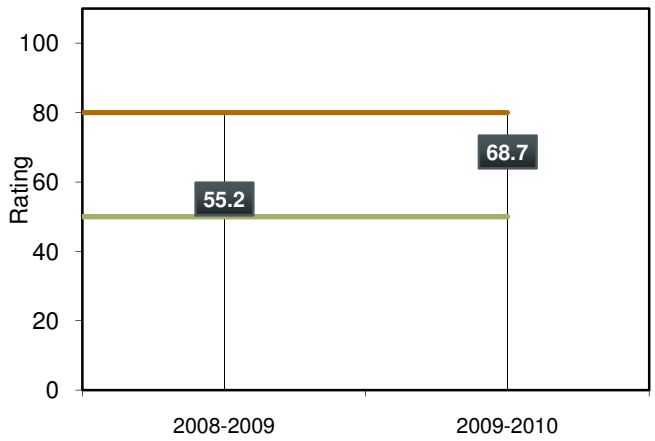
Water Consumed / Passenger



The **Auckland International Airport** consumed 22.8 L per Passenger for the year 2008-2009 (1 July 2009 – 30 June 2010), which was 22.5% better than Best Practice.

Quantity	Unit	Potable Water
169 055	cubic metres	169 055.0 kL
	Totals:	**169 055.0 kL**

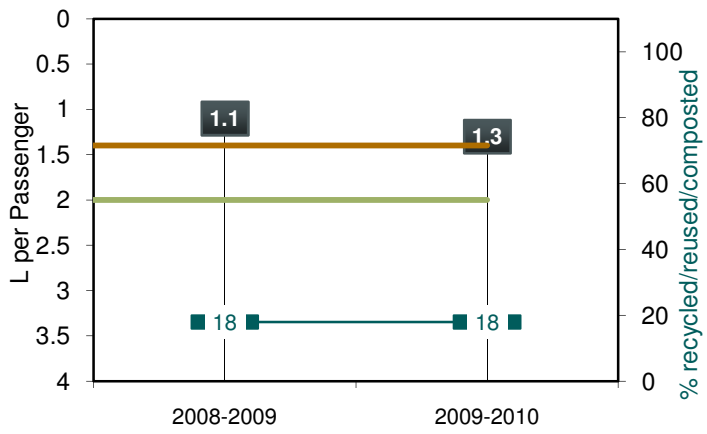
Water Saving



The Water Saving checklist rating of 68.7 points for the year 2009-2010 (1 July 2009 – 30 June 2010), was 18.7 points better than Baseline Level.

4. Waste Sent to Landfill

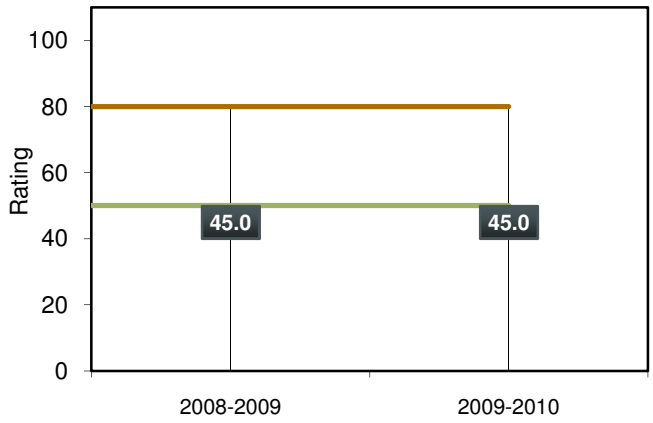
Waste Sent to Landfill / Passenger ★



The **Auckland International Airport** produced 1.3 L per Passenger for the year 2009 - 2010 (1 July 2009 – 30 June 2010), which was 4.2% better than Best Practice Level.

Quantity	Unit	Waste Sent to Landfill
5895	tonnes (compacted)	9069.2 m^3
263	tonnes (uncompacted)	876.7 m^3
	Totals:	**9945.9 m^3**

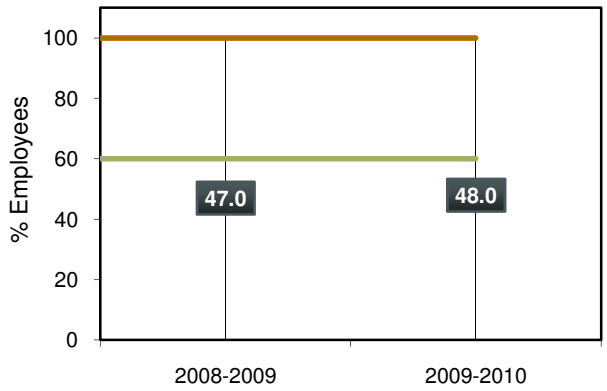
Waste Recycling ✘



The Waste Recycling checklist rating for the year 2009-2010 (1 July 2009 – 30 June 2010) was 45.0 points, which was 5.0 points below the Baseline Level.

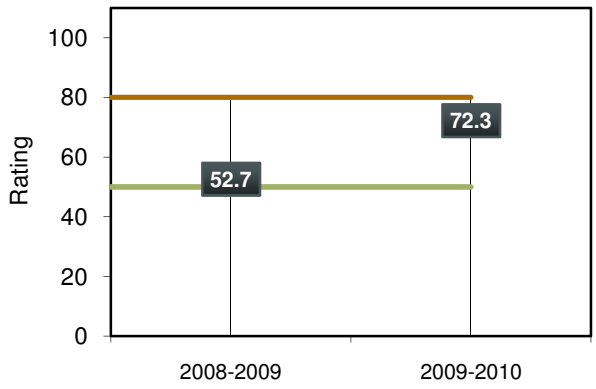
5. Community Commitment

Employees living within 20 km of operation / Total employees ✘



Community Commitment for the year 2009-2010 (1 July 2009 – 30 June 2010) was 48%, which was 12 % below the Baseline Level.

Community Contributions ✓



The Community Contributions checklist rating for the year 2009-2010 (1 July 2009 – 30 June 2010) was 72.3 points, which as 22.3 points better than the Baseline Level.

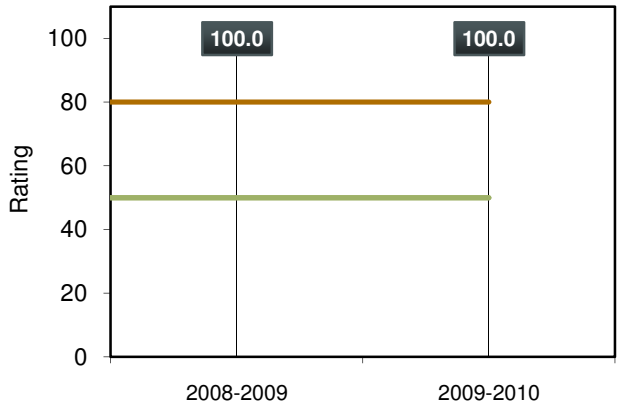
6. Paper Products

Product types used ★

The Paper Products checklist rating for the year (1 July 2009 – 30 June 2010) was 100 points, which was 20 points better than the Best Practice level.

7. Chemical Products/Cleaning Products

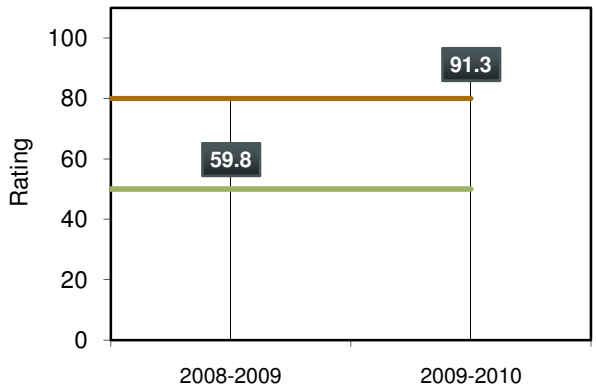
Product types used ★



The Cleaning Products checklist for the year (1 July 2009 – 30 June 2010) was 100 points, which was 20 points better than the Best Practice level.

8. Pesticide Products

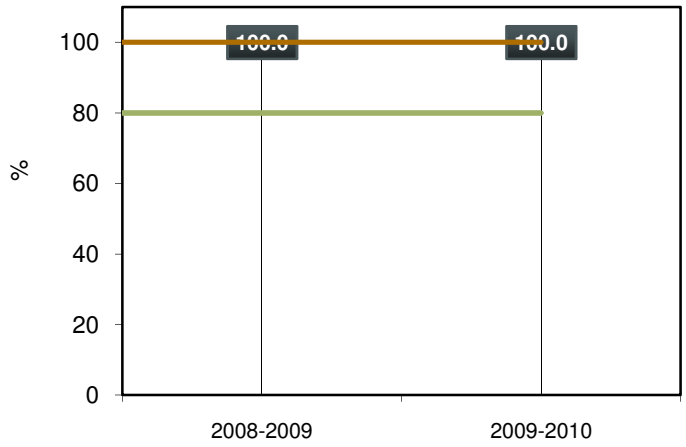
Product types used ★



The Pesticide Products checklist rating for the year (1 July 2009 – 30 June 2010) was 91.3 points, which was 11.3 points better than the Best Practice level.

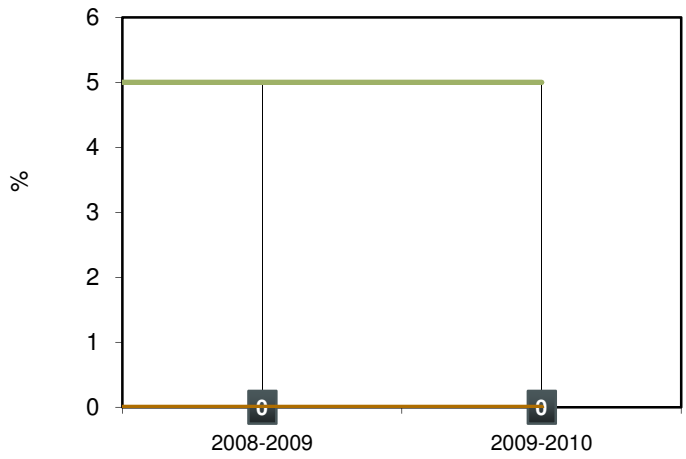
9. Sector Specific

Water Samples Passed ★



For the year 2009-2010 (1 July 2009 – 30 June 2010) 100% of the water samples passed, which was at the Best Practice level.

Proven Noise Infringements ★



Proven Noise Infringements (%) for the year 2009-2010 (1 July 2009 – 30 June 2010) was 0%, which was at the Best Practice level.

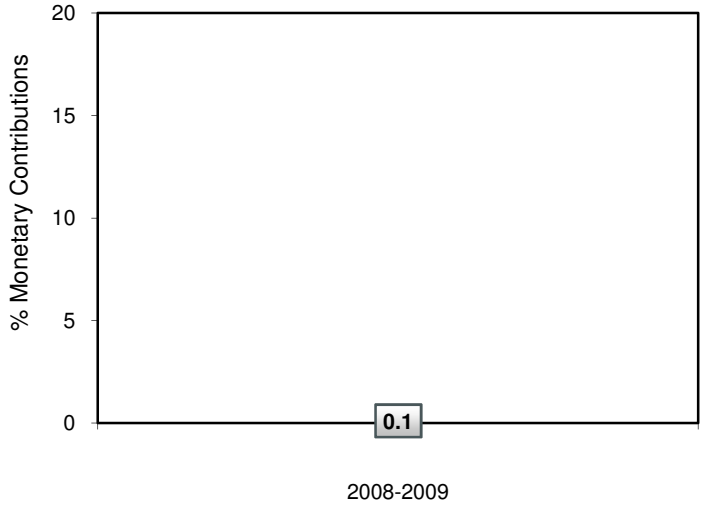
Optional Benchmarking Indicators

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

1. Selected Indicators

Selected Indicators are from a supplied list of EarthCheck indicators.

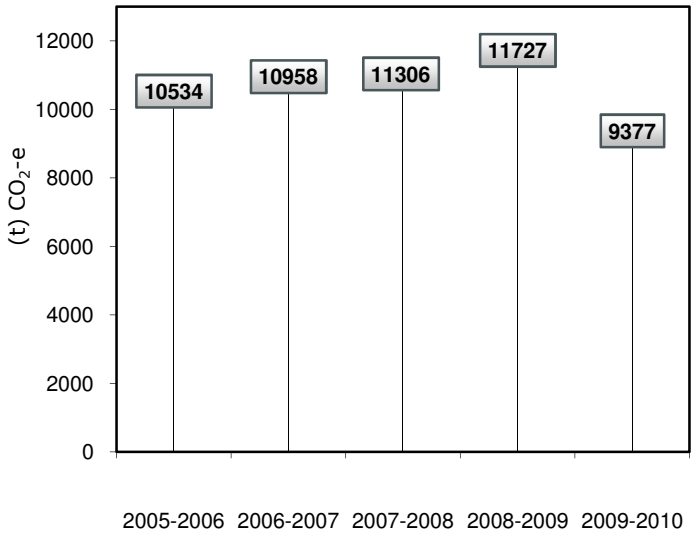
Monetary local community activity contributions ($) pa / Net operational turnover ($) pa



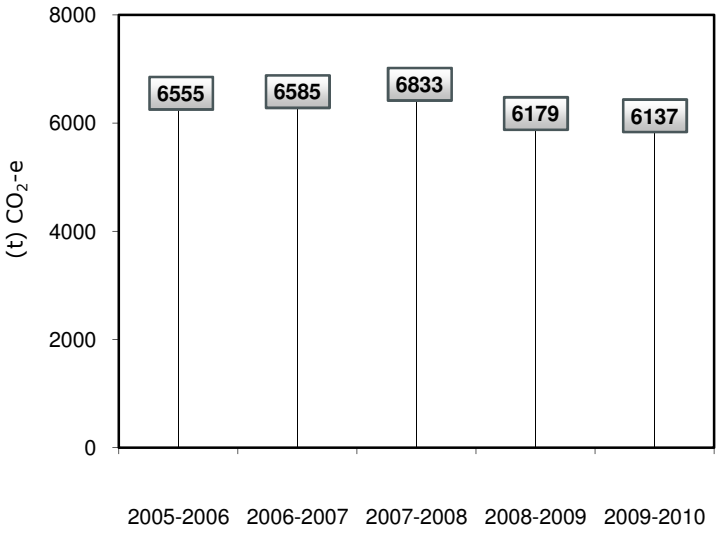
2. Operation Specified

Climate change/energy and fuel efficiency

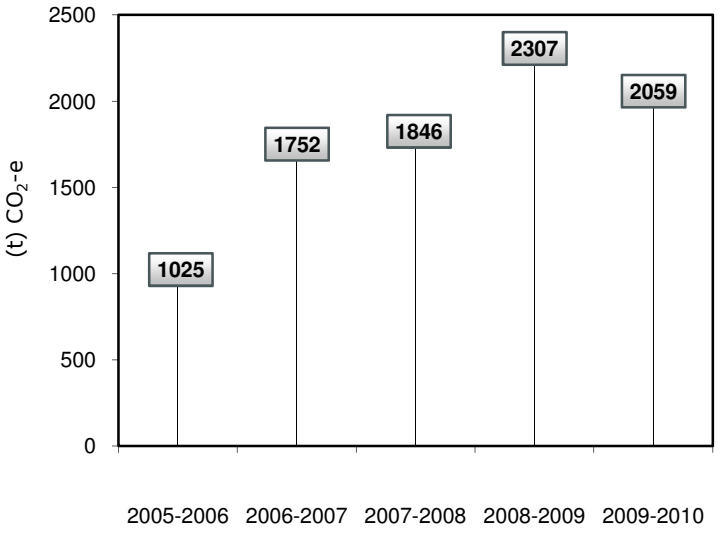
Total CO_2-e



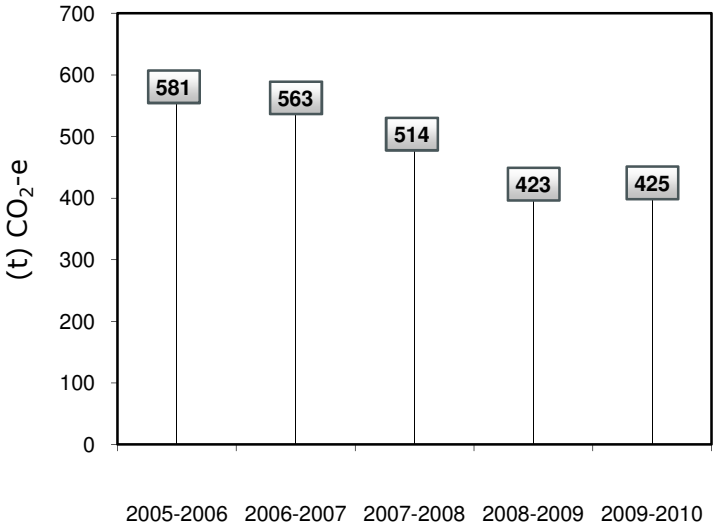
CO_2-e from Electricity



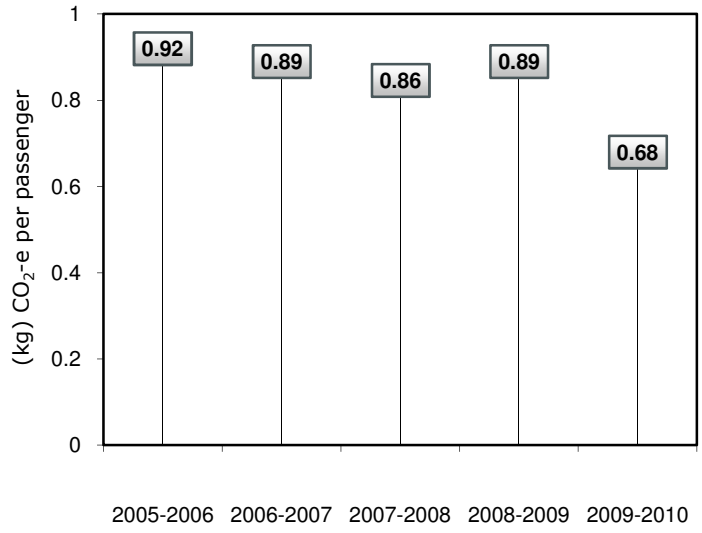
CO_2-e from Gas



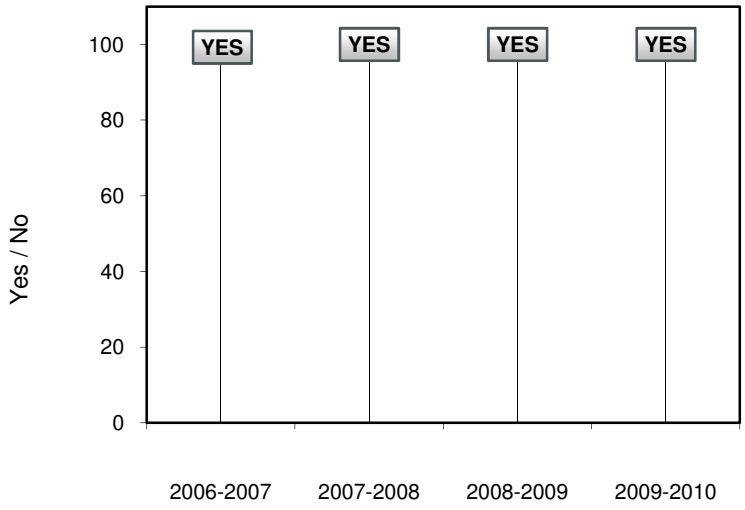
CO_2-e from company fleet



Kg of CO2-e per passenger

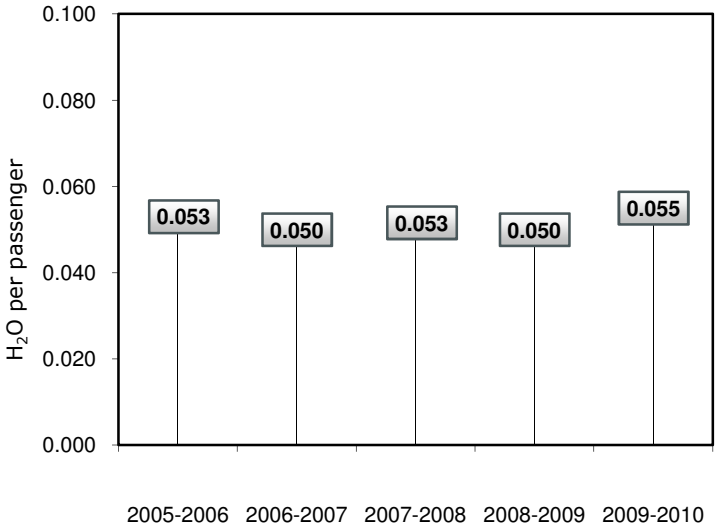


Completed and disclosed annual Carbon Disclosure Project return.

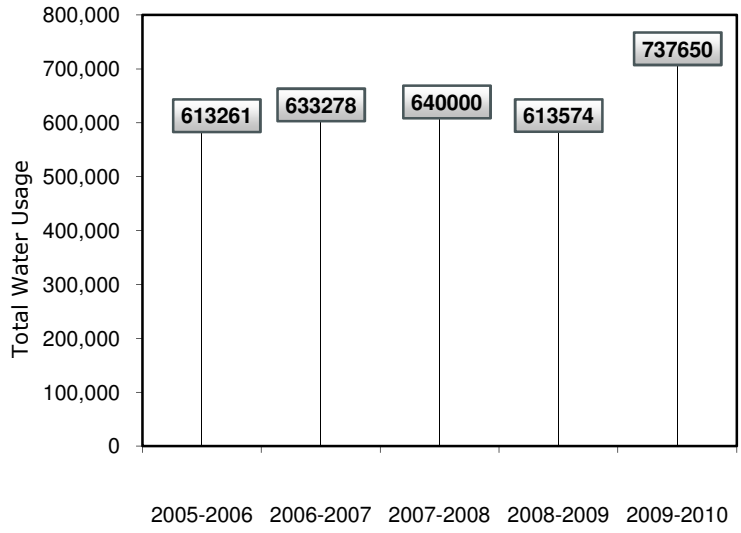


Resource Use

H_2O per passenger

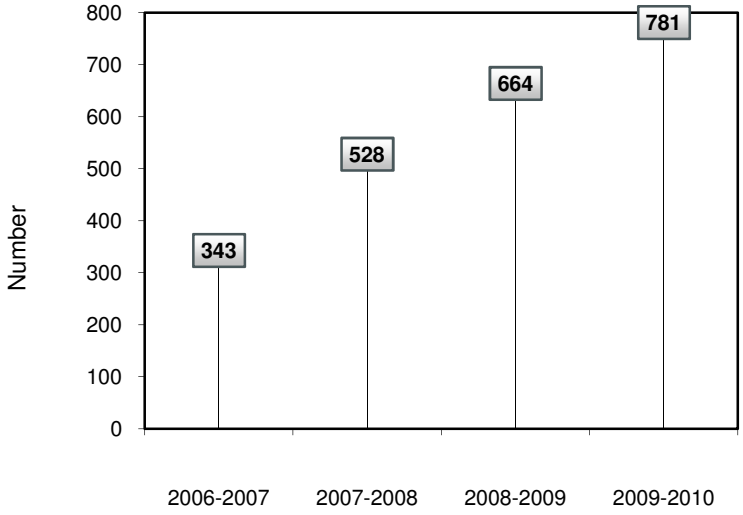


Total Water Usage



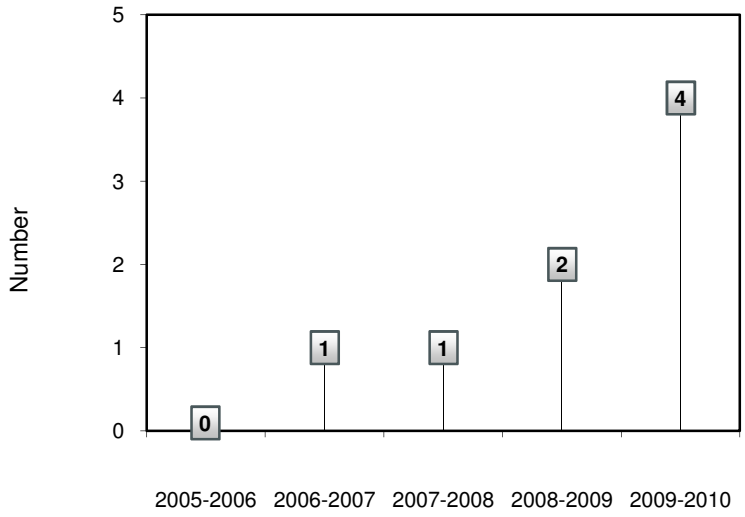
Surface Access

Lift / Registered Carpoolers

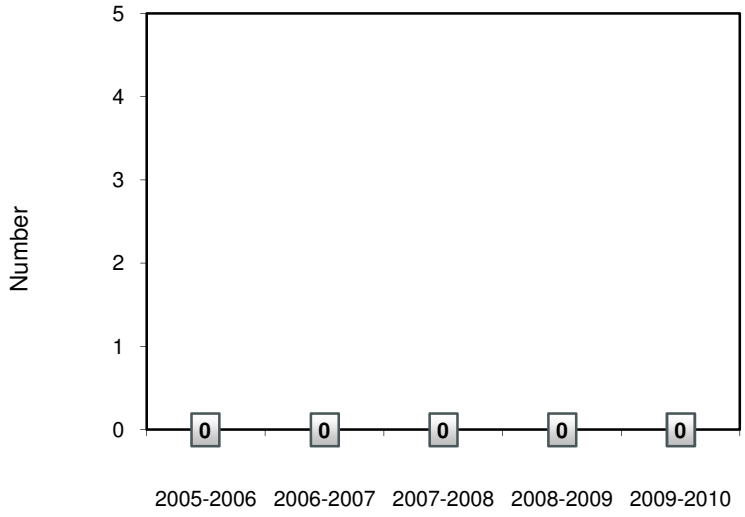


Environmental Sustainability

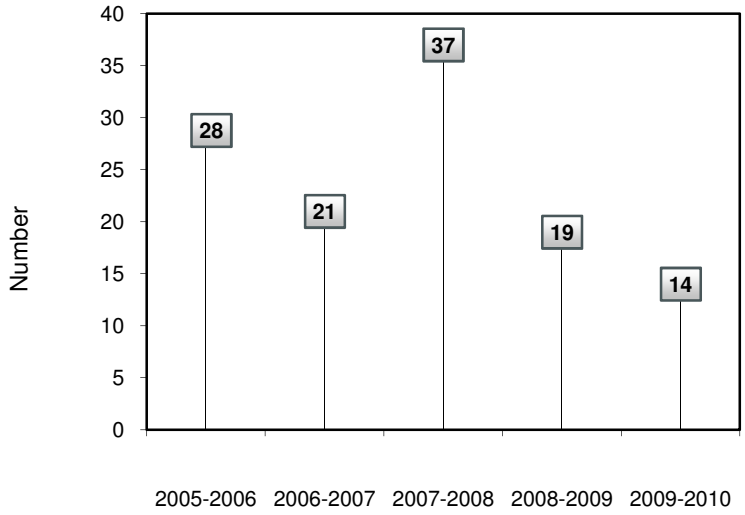
Spills over 2m²



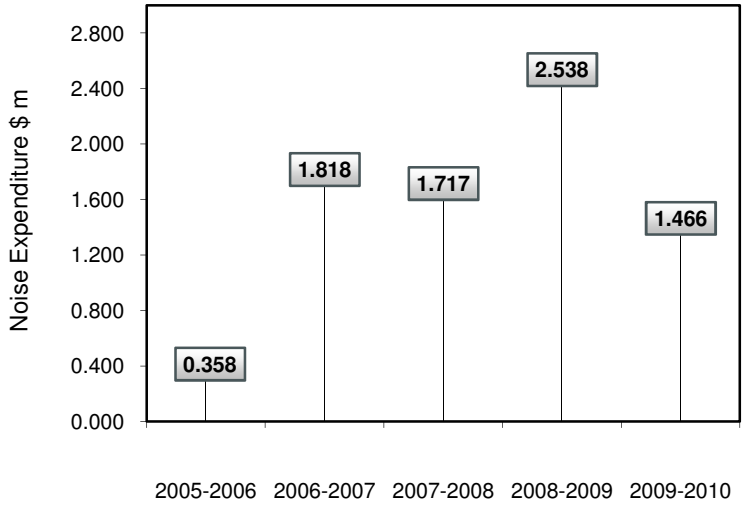
Spills to Environment



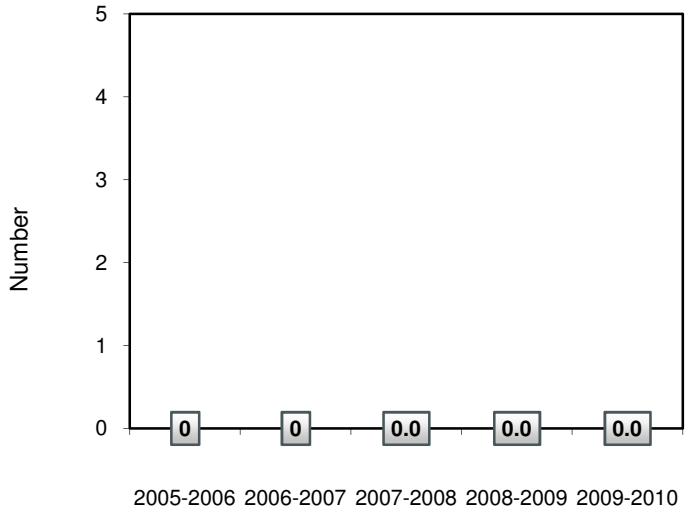
Number of Noise Enquiries



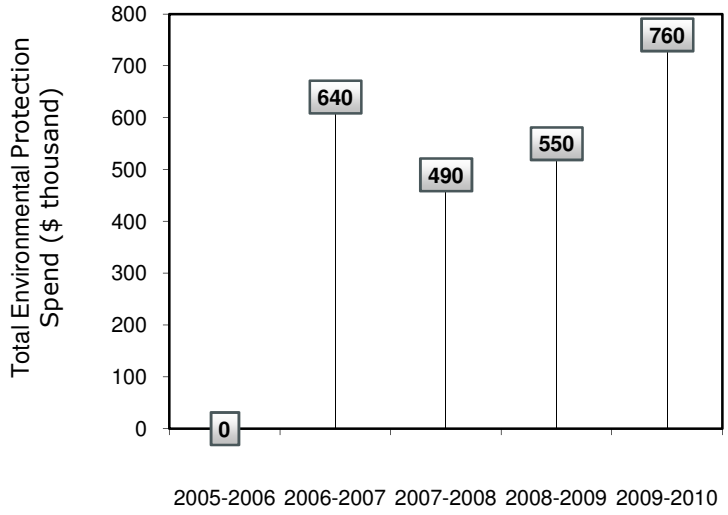
Noise Expenditure ($ million)



Non Compliant Notices

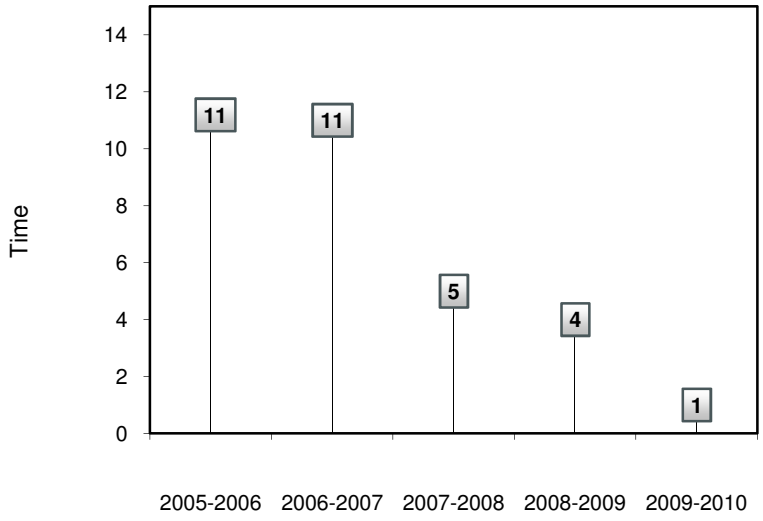


Total Environmental Protection Spend ($ thousand)

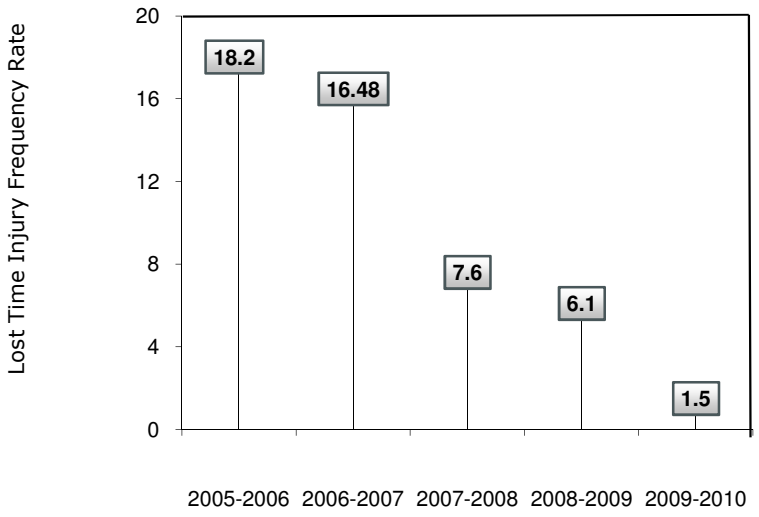


Safety

Lost Time Injury actual

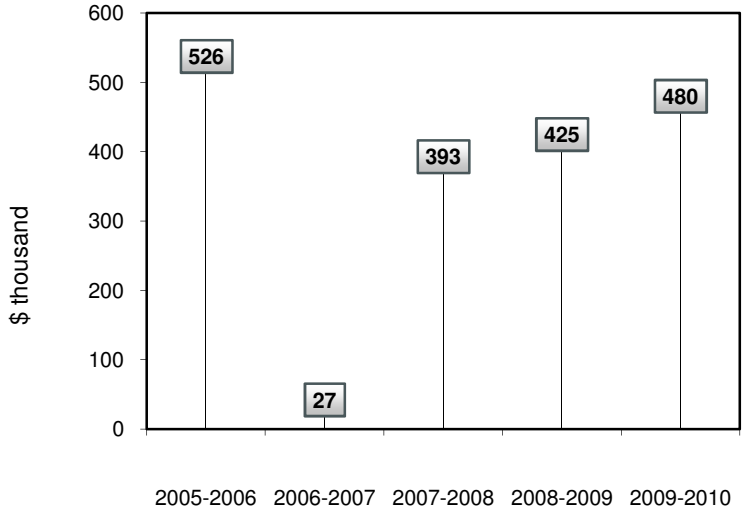


Lost Time Injury Frequency Rate



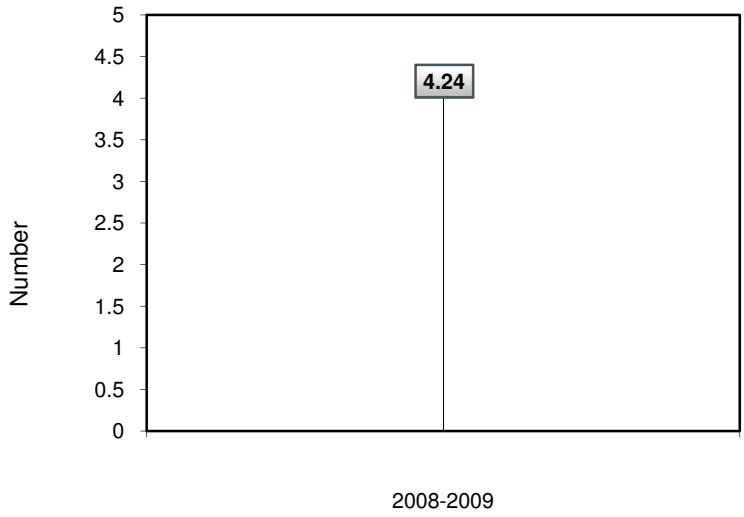
Community

Sponsorship Spend ($ Thousands)



Other

Total Shareholder Return



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

CONCLUSION AND RECOMMENDATIONS

Congratulations, the **Auckland International Airport** has passed the requirements to be recognised as an EarthCheck Benchmarked Airport.

In addition to having a Sustainability Policy in place, eleven of the assessed EarthCheck indicators are at or above the Baseline level. From the benchmarking data provided, seven indicators, *Potable Water Consumption, Waste Sent to Landfill, Paper Products, Cleaning Products, Pesticide Products, Stormwater Management* and *Noise Nuisance,* are at or above the Best Practice level.

The two indicators that fell below the Baseline level were *Waste Recycling* and *Community Commitment*.

The value for Waste Recycling was 5.0 Points below the Baseline level. A low rating for this indicator may be a reflection of the limited availability of external recycling facilities (for paper, cardboard, metals, plastics etc). The **Auckland International Airport** are encouraged to review existing practices and procedures. This can include increasing on-site recycling and reuse (e.g. green wastes), donating recyclable materials to local crafts and trades people, and avoiding purchases with excessive disposable packaging.

The value for Community Commitment was 12.0% below the Baseline level. The **Auckland International Airport** are, therefore, encouraged to continue to look to local recruitment as much as possible (e.g. through operating in-house training programs) and/or increase the use of on-site or local housing for its staff. This will not only help contribute to the local economy, but also reduce the significant negative environmental impacts related to long-distance travel to and from work.

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 **Auckland International Airport** 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 **Auckland International Airport** is encouraged to ensure that Energy Consumption, Greenhouse Gas Emissions (Scope 1 and Scope 2), Potable Water Consumption, Waste Recycling, Community Commitment are at Baseline performance or better. In line with EarthCheck Policy this would enable the **Auckland International Airport** to continue to meet the benchmarking requirements of the EarthCheck program.

APPENDIX

BENCHMARKING POLICY

A member benchmarking for the 2nd time is permitted to fall below Baseline in one (1) EarthCheck™ indicator (excluding supplementary EarthCheck™ indicators) with a 2nd EarthCheck™ indicator permitted to be within 10% of the Baseline level. **A member benchmarking for the 3rd time is not permitted to fall below Baseline in any EarthCheck™ indicators (excluding supplementary EarthCheck™ indicators), however, one (1) EarthCheck™ indicator may be within 10% of the Baseline level.**

ACTIVITY MEASURE

At time of Certification Services it was identified that the area under roof was required to be re-calculated as the tenanted areas had been included which was not included in the scope of the **Auckland International Airports** operation. The **Auckland International Airport** advised that

'Removing tenanted areas reduces our total m^2 to a total of 94 220m^2'

This has been updated accordingly for the 2008-2009 and 2009-2010 benchmarking periods.

WASTE SENT TO LANDFILL

The following figures for *Waste Sent to Landfill* have been submitted;

5 895 tonnes (compacted)
263 tonnes (uncompacted)

The benchmarking assessors have converted the supplied figures from a weight to a volume as per the methodology below;

The submitted value of 5 895 tonnes (5 895 000 kg) of waste (specified by the operator as compacted waste) has been converted into a volume by using the standard conversion of: 1 kg (compacted waste) = 0.00153846 m^3 or 1.53846 L (i.e. 5 895 000 kg x 0.00153846 = 9 069.23 m^3 or 9 069 230.8 L). (If the waste is uncompacted, then the standard conversion is: 1 kg = 0.00333333 m^3 or 3.33333 L).

The submitted value of 263 tonnes (263 000 kg) of waste (specified by the operator as uncompacted waste) has been converted into a volume by using the standard conversion of 1 kg (uncompacted waste) = 0.00333333 m^3 or 3.33333 L (i.e. 263 000 kg x 0.00333333 = 876.7 m^3 or 876 666.7 L). (If the waste is compacted, then the standard conversion is: 1 kg = 0.00153846 m^3 or 1.53846 L).

This equates to 1.3 L per passenger.

OPTIONAL INDICATORS

As per advised by the **Auckland International Airport** the Benchmarking Assessors have revised the above optional indicators accordingly.

EARTHCHECK

Benchmarks Assessed by EarthCheck

Summary of Supplied Benchmarking Data

Activity Measures

Area Under Roof	94 220
Total Passengers	7 415 792

Supplied Benchmarking Data

Energy

Energy Consumption (L / Square Metre)

Supplied	172 630 400.5 MJ
Calculated	1 832.2 MJ / Square Metre
Baseline	2085 MJ / Square Metre
Best Practice	1460 MJ / Square Metre
Difference	12.1 % better than the Baseline level

Green Power (%)

Supplied	0%
Calculated	0%

Greenhouse Gas Emissions (Scope 1 and Scope 2) (kg CO2-e / Square Metre)

Supplied	9 379 040.0 kg CO2-e
Calculated	99.5 kg CO2-e / Square Metre
Baseline	113 kg / Square Metre
Best Practice	79 kg / Square Metre
Difference	11.9% better than Baseline Level

Direct Emissions (Scope 1) (kg CO2-e / Square Metre)

Supplied	252 0671.3 kg CO2-e
Calculated	26.8 kg CO2-e / Square Metre

Indirect Emissions (Scope 2) (kg CO2-e / Square Metre)

Supplied	6858368.8 kg CO2-e
Calculated	72.8 kg CO2-e / Square Metre

Water

Potable Water Consumption (L / Passenger)

Supplied	169055000.0 L
Calculated	22.8 L / Passenger
Baseline	39.8 L / Passenger
Best Practice	29.4 L / Passenger
Difference	22.5% better than Best Practice

Recycled / Captured Water (%)

Supplied	0%
Calculated	0%

Water Savings Rating (Points)

Supplied	68.7 Points
Calculated	68.7 Points
Baseline	50 Points
Best Practice	80 Points
Difference	18.7 Points better than the Baseline level

Waste

Waste Sent to Landfill (L / Passenger)

Supplied	9945897.4 L
Calculated	1.3 L / Passenger
Baseline	2 L / Passenger
Best Practice	1.4 L / Passenger
Difference	4.2% better than the Best Practice level

Recycled / Reused / Composted Waste (%)

Supplied	18.0%
Calculated	18.0%

Waste Recycling Rating (Points)

Supplied	45.0 Points
Calculated	45.0 Points
Baseline	50 Points
Best Practice	80 Points
Difference	5.0 Points below the Baseline level

Community

Community Commitment (%)

Supplied	48.0%
Calculated	48.0%
Baseline	60 %
Best Practice	100 %

Difference	12.0% below the Baseline level

Community Contributions Rating (Points)

Supplied	72.3 Points
Calculated	72.3 Points
Baseline	50 Points
Best Practice	80 Points
Difference	22.3 Points better than the Baseline level

Paper

Paper 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

Cleaning

Cleaning 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

Pesticides

Pesticide Products Rating (Points)

Supplied	91.3 Points
Calculated	91.3 Points
Baseline	50 Points
Best Practice	80 Points
Difference	11.3 Points better than the Best Practice level

Sector Specific

Water Samples Passed (%)

Supplied	100%
Calculated	100%
Baseline	80 %
Best Practice	100 %
Difference	at the Best Practice level

Proven Noise Infringements (%)

Supplied	0%
Calculated	0%
Baseline	5 %
Best Practice	0 %
Difference	at the Best Practice 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).