

Education Services Australia Limited

ENVIRONMENT REPORT

2011-12



Education
Services
Australia

Education Services Australia Limited
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As used in this Environment Report, 'Education Services Australia' means Education Services Australia Limited.

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Background

Education Services Australia is committed to implementing policies and practices to support environmental sustainability. This is a responsible and ethical course for a modern organisation.

In taking action on environment issues, Education Services Australia:

- contributes to Australia's efforts to reduce environmental impact
- meets expectations of stakeholders, clients and staff
- maximises efficiency and reduces costs
- improves its ability to attract and retain the best talent
- adds credibility to its activities within sustainability education
- strengthens its reputation as a socially responsible supplier of education services.

Education Services Australia's policy is to publish an annual Environment Report that provides a summary of activities undertaken in the previous financial year and of commitments for the current financial year. This is the second Environment Report.

Environment policy

Education Services Australia's Environment Policy provides direction for the company's environment program and public reporting, which should include:

- an emissions inventory
- achievements to date
- details on purchased offsets
- information on external assurance
- identification of future opportunities
- targets for the next financial year.

The policy is provided at Appendix 1.

National Carbon Offset Standard (NCOS) Accreditation

In March 2012, Education Services Australia was accredited as a carbon-neutral company under the Australian Government's National Carbon Offset Standard (NCOS) scheme. Details of the company's accreditation can be found at the Low Carbon Australia website <http://www.lowcarbonaustralia.com.au>.

Education Services Australia is one of 28 companies to have achieved NCOS accreditation in Australia.



Environment Targets 2011-12

Education Services Australia's environment targets for the 2011-12 year were an 8 per cent reduction in electricity consumption per FTE and a 6 per cent reduction in emissions per FTE.

The company exceeded its 2011-12 targets. The results were a 27 per cent reduction in electricity consumption per FTE and a 22 per cent reduction in emissions per FTE. The main driver in achieving these results was an absolute decrease in emissions.

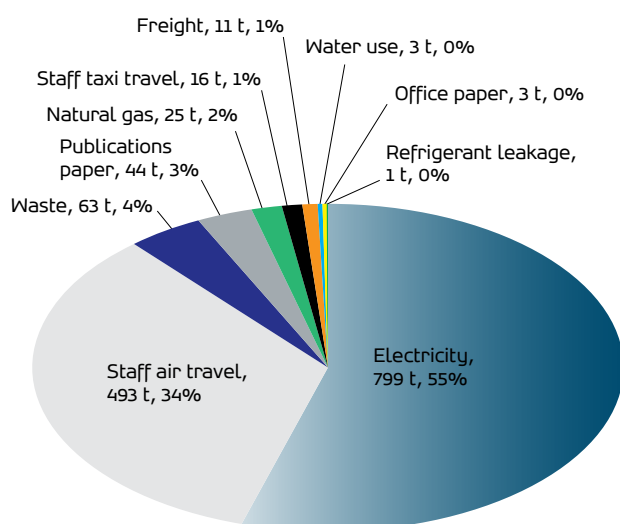
Emissions inventory

The Education Services Australia emissions inventory has been based on the Greenhouse Gas Protocol, 'A Corporate Accounting and Reporting Standard' revised edition March 2004 (GHG Protocol).

This protocol is the most accepted international standard for the preparation of carbon inventories and is an initiative of the World Resources Institute and the World Business Council for Sustainable Development.

Figure 1 provides an overview of the company's emissions by source measured in tonnes of carbon dioxide equivalents (t CO₂-e) and percentage proportion of the overall inventory for 2011–12. The emission inventory results for 2010–12 are summarised in Tables 1 and 3. Detailed results for 2011–12 are provided at Appendix 4.

Figure 1:
CO₂-e emissions by source 2011–12
(tonnes and percentage)



Education Services Australia is demand driven, responding to the needs of the Australian Ministers with responsibility for education. As such, its business activities may fluctuate significantly from year to year. To enable longitudinal comparisons, emission inventory results are reported as both absolute and intensity measures. Methodologies are outlined at Appendixes 2 and 3.

The summary of the inventory results for 2010–12 based on absolute measures is provided in Table 1.

Summary of emissions inventory

Table 1:
Emissions inventory summary 2010–2012

Emission source	CO ₂ -e (tonnes)	
	2011–12	2010–11
Electricity	799	1,076
Staff air travel	493	497
Waste	63	53
Publications paper	44	63
Natural gas	24	30
Staff taxi travel	16	13
Freight	11	37
Water use	3	9
Office paper	3	4
Refrigerant leakage	1	1
Total emissions	1,457	1,783
Offset measures		
Offsets purchased	(1,457)	(1,783)
Total net emissions	Nil	Nil

A single intensity measure – full-time equivalent (FTE) staffing – based on the staffing levels provided in Table 2, is used in this report.

Table 2:
FTE staffing 2010–12

FTE	2011–12	2010–11
Staff	168	152
On-site contractors	20	18
Sub-tenants	3	17
Total	191	187

Care needs to be exercised when reviewing an intensity measure using FTE. Electricity consumption and emissions do not increase or decrease in a direct linear fashion to changes in FTE, and changes in results can occur through movements in FTE alone. Emissions per FTE can decrease independently of any real reductions.

Education Services Australia’s average FTE increased during 2011–12. However, the main driver in meeting targets was an absolute decrease in emissions. This is detailed in Table 1.

Table 3 details the 2011–12 reduction in emissions per FTE. The significant year on year change is due to a reduction of 277 tonnes CO₂-e in electricity consumption.

It is estimated that two-thirds of the reduction in energy consumption results from physical changes in the floor space occupied by the company. The company vacated the seventh floor of its Melbourne office in 2010–11 and the first floor of its Adelaide office in 2011–12.

It is estimated that one-third of the reduction in energy consumption results from the emission-reduction initiatives detailed in Table 4.

Table 3:
Emissions inventory summary 2010–12 by staffing (FTE)

Emission source	CO ₂ -e (tonnes)	
	2011–12	2010–11
Electricity	4.19	5.76
Staff air travel	2.93	3.27
Waste	0.30	0.41
Publications paper	0.26	0.29
Natural gas	0.13	0.20
Staff taxi travel	0.09	0.16
Freight	0.07	0.09
Water use	0.02	0.05
Office paper	0.02	0.02
Refrigerant leakage	0.00	0.01
Total emissions	8.01	10.25

Contractors and sub-tenants have been excluded from Table 3 calculations of staff air travel, staff taxi travel, freight and publications as they have no influence on these activities.

Figure 2: CO₂-e emissions per FTE 2010–12 (tonnes)

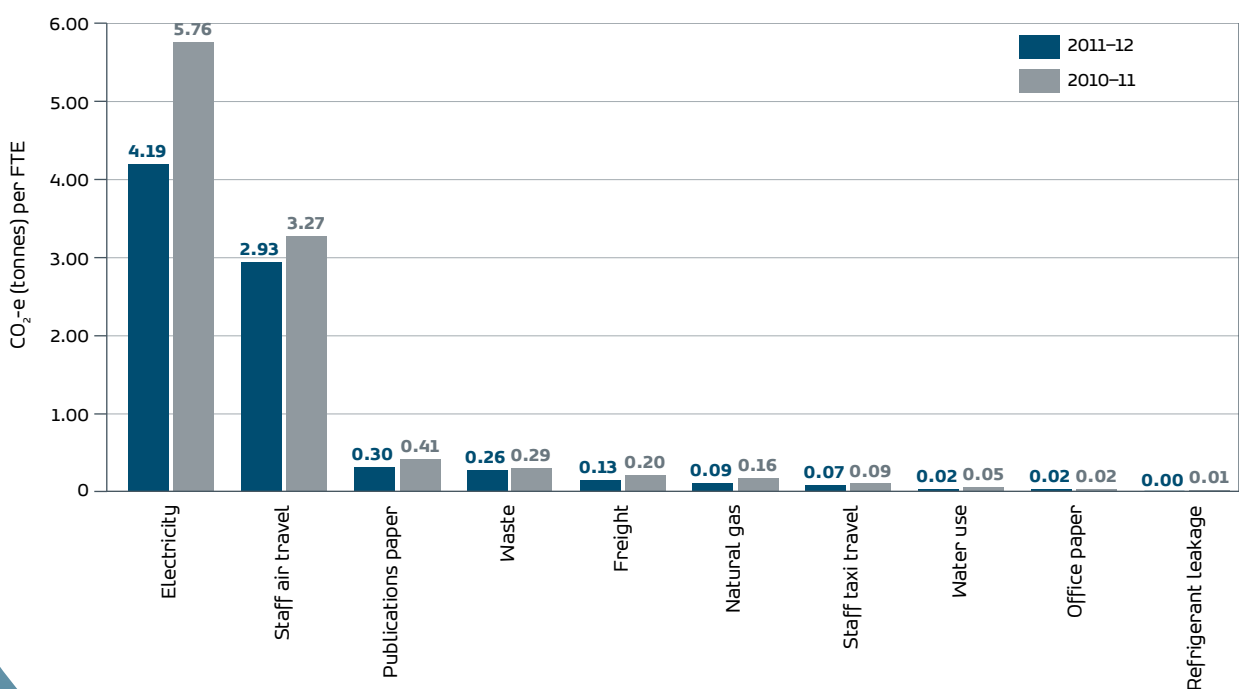


Table 4:
Emission-reduction initiatives 2011–12

Emission-reduction initiative	Estimated reduction in emission quantity (tonnes CO₂-e)
Retrofit T8 fluoro office lights	38
Switch off computers	17
Retrofit halogen downlights	14
Remove excess fluoro office lights	13
Replace desktop PCs with less energy-intensive models	8
Replace monitors with less energy-intensive models	3
Replace photocopiers and printers with less energy-intensive models	2
Total	95

Offsets

Electricity and air flights are responsible for 89 per cent of Education Services Australia’s emissions. These cannot be eliminated through increased efficiencies alone.

Education Services Australia therefore purchased 1,457 tonnes of carbon offsets through Climate Positive to achieve carbon neutrality in 2011–12. The carbon offsets were sourced from the Mongolia Chifeng Gaofeng Wind Power Project, which replaces carbon-intensive fossil fuel electricity generation in Mongolia and provides economic opportunities to the local community. The project is accredited under the Verified Carbon Standard. Proof of the offsets’ retirement can be found at the Markit Registry website under serial number 2188-89507614-89511113-VCU-008-APX-CN-1-813-01012009-31122009-0.

Details relating to the project and its verification are also published in the Verified Carbon Standard database www.vcsprojectdatabase.org.

External assurance

NCOS accreditation requires third-party verification of the emissions inventory on a bi-annual basis. The 2010–11 emissions inventory was externally audited as part of the NCOS application.

This 2011–12 submission does not require verification under the NCOS standard.

There have been no changes to the processes for data collection or the preparation of the company emissions inventory since the 2012–11 verification audit.

Achievements 2011–12

Carbon neutrality and national carbon offset standard accreditation

Education Services Australia was accredited as a carbon neutral company under the Australian Government National Carbon Offset Standard (NCOS) scheme in March 2012.

Staff keep cups

To mark NCOS accreditation, staff was provided with Education Services Australia branded keep cups, the most popular re-useable plastic coffee cup in Australia. This initiative saves on wasted paper cups and promotes the company's environmental successes in the community and among staff.

Energy audit

The 2010–11 energy audit identified opportunities for increased energy efficiency, which were implemented during 2011–12. The emissions inventory (Appendix 4) shows that the proportion of emissions from electricity usage under Education Services Australia's control reduced from 34.88 per cent in 2010–11 to 27.20 per cent in 2011–12.

Replacement of ageing equipment

Ninety desktop computers, 20 laptops, 50 monitors and four multifunction printers/photocopiers were replaced with energy-efficient models that consume less electricity. Actual measurements of performance for the new equipment show the following average reductions in energy consumption: desktop computers 55 per cent, laptops 28 per cent, monitors 73 per cent and multifunction printers/photocopiers 32 per cent.

Redundant computer equipment was passed to a company that reconditions it and either passes the equipment to community groups or recycles it.

Follow-me printing facilities

The new multifunction printers include a 'follow-me' user function, which only releases print jobs when the user swipes their office security pass across the printer recognition pad.

Based on counts of wasted paper in the Melbourne office during 2012, it is estimated that the introduction of the 'follow-me' printing option could reduce paper waste by 17,000 sheets in the first year of operation.

Paper recycling

All waste office paper is recycled.

Printer cartridge recycling

All print cartridges are recycled.

Video-conferencing facilities

Video-conferencing equipment was introduced into meeting rooms in the Melbourne office. This provides staff with the opportunity to reduce the number of flights they undertake to meet with stakeholders both nationally and internationally.

Office-based co-mingled recycling

The offices in Collins St Melbourne were first occupied in May 2008. At that time there was no mechanism to recycle co-mingled waste in the building. The company created a tenant's cooperative and negotiated with the landlord to introduce co-mingled recycling, which has been in operation since July 2009.

Opportunities 2012–13

Meeting room sensors and office light timers

Meeting room lighting sensors and a timer for each floor will be implemented so that office lighting cuts out at a predetermined time every evening. Based on physical reviews of when lights are left on in the office, it is estimated that the energy and emissions savings detailed in Table 4 could be achieved.

Table 5:
Efficiency opportunities 2012–13

Emission reduction initiative	Estimated reduction in emission quantity (tonnes CO ₂ -e)
Office lighting timer cut-out	7
Meeting room lighting sensors	3
Total	10

Growth 2012–13

There has been a significant growth in FTE staff and related occupied office floor space in the last quarter of 2011–12 and the first five months of 2012–13 resulting from a demand for company services. It is therefore anticipated that absolute emissions will increase in the 2012–13 financial year.

Further information

Requests for further information can be directed by email to Michael Collins at michael.collins@esa.edu.au.

ENVIRONMENT TARGETS 2012–13

- 5% reduction in emissions per FTE

This is a modest target based on the opportunities identified in this report. A glass ceiling of future opportunities can very easily be reached in an office-based environment. Education Services Australia will face this issue in the future.

Appendixes

Appendix 1: Education Services Australia Environment Policy

Background

Education Services Australia is committed to implementing policies and practices to minimise its environmental impact and to support environmental sustainability. The company believes this is a responsible and ethical course for a modern organisation. In taking action on environment issues the company will:

- contribute to Australia's efforts to reduce environmental impact
- meet expectations of stakeholders, clients and staff
- maximise efficiency and reduces costs
- improve its ability to attract and retain the best talent
- strengthen its reputation as a socially responsible supplier of education services
- add credibility to its activities within sustainability education.

Scope

This policy applies to all Education Services Australia operations with the exception of the Standing Council on Employment, Education and Early Childhood (SCSEEC), which is outside its operational control.

Commitment

This policy commits Education Services Australia to:

- minimise its impact on the environment through reduced greenhouse gas emissions and reduced resource usage
- be carbon neutral
- implement best-practice carbon-management principles
- report a summary of progress in the company's Annual Report
- report in detail in the annual Environment Report
- include environmental education material where possible in its services, recognising that the capacity to do so is dictated by clients' requirements.

Implementation

Implementation to be reported through the Environment Report will include:

- annual greenhouse gas reduction targets
- annual waste, energy and water reduction targets
- an emissions inventory
- progress reports against targets, which should show trends as well as details of methodologies used in measurement
- details of purchased offsets
- details of future opportunities that will give rise to reductions
- progress reports against identified opportunities
- independent external assurance confirmation.

All targets will be time bound and quantified in absolute terms (total emissions and usage) and in intensity terms (reported by a unit of volume, eg per full-time equivalent employee) and will be reported against a baseline-year emissions measurement.

Responsibility

This policy is the responsibility of the Chief Executive Officer. It will be reviewed annually to ensure ongoing relevance.

Appendix 2: Emissions inventory scope

Education Services Australia is a not-for-profit company limited by guarantee. The company has no share capital in issuance and no subsidiaries. It has elected to use the Operational Control method to set Organisational Boundaries. All Scope 1 and Scope 2 emissions, and all relevant material and measurable Scope 3 emissions have been included for company operations.

All Education Services Australia operations are included with the exception of the Standing Council on Employment, Education and Early Childhood (SCSEEC). SCSEEC is part of Education Services Australia's legal structure but is outside the company's operational control.

Appendix 3: Calculation methodologies and emissions factors

Emission source	Methodology	Factor		Factor source
Refrigerant leakage	<p>Kitchen fridges: Kg charge and refrigerant type identified for each unit. Global warming potential of each refrigerant obtained and standard leakage rates from DEFRA UK 2011 Guidelines Annex 8b.</p> <p>GWP × charge × leakage rate.</p> <p>Air conditioning (A/C) units: Same as kitchen fridges.</p>	0.3%	Leakage rate	DEFRA UK 2012 Guidelines Annex 8b
Purchased electricity excluding base building use – Victoria	<p>Usage in kWh obtained from supplier invoice data.</p> <p>Usage data × emissions factor.</p>	1.19	kg CO ₂ -e/kWh	EF for purchased electricity per Table 40, July 2012 NGA factors
Purchased electricity excluding base building use – South Australia	<p>Usage in kWh obtained from supplier invoice data.</p> <p>Usage data × emissions factor.</p>	0.65	kg CO ₂ -e/kWh	EF for purchased electricity per Table 40, July 2012 NGA factors
Purchased electricity – tenant’s share of base building use – Victoria	<p>Usage in kWh obtained from landlord’s from landlord’s invoices and percentage share of net lettable area applied to calculate user’s share.</p> <p>Usage data × emissions factor.</p>	1.19	kg CO ₂ -e/kWh	EF for purchased electricity per Table 40, July 2012 NGA factors
Purchased electricity – tenant’s share of base building use – South Australia	<p>Usage in kWh obtained from landlord’s from landlord’s invoices and percentage share of net lettable area applied to calculate user’s share.</p> <p>Usage data × emissions factor.</p>	0.65	kg CO ₂ -e/kWh	EF for purchased electricity per Table 40, July 2012 NGA factors

Emission source	Methodology	Factor	Factor source
Staff air travel:			
Staff air travel – domestic <1,000 km	Flight distance data obtained from company travel agents and multiplied by emissions factor. However, a 9 per cent uplift factor was applied to allow for inaccuracies of scheduled distances vs actual distances flown and a further uplift factor of 1.9 was applied to allow for radiative forcing.	0.20124 kg CO ₂ -e/ passenger km	2012 Guidelines to DEFRA/ DECC's GHG conversion factors for company reporting Annex 6l
Staff air travel – short-haul international 1,000–3,700 km economy		0.10946 kg CO ₂ -e/ passenger km	2012 Guidelines to DEFRA/ DECC's GHG conversion factors for company reporting Annex 6l
Staff air travel – short-haul international 1,000–3,700 km business class		0.16419 kg CO ₂ -e/ passenger km	2012 Guidelines to DEFRA/ DECC's GHG conversion factors for company reporting Annex 6l
Staff air travel – long-haul international economy >3,700km		0.09594 kg CO ₂ -e/ passenger km	2012 Guidelines to DEFRA/ DECC's GHG conversion factors for company reporting Annex 6l
Staff air travel – long-haul international business class >3,700 km		0.27823 kg CO ₂ -e/ passenger km	2012 Guidelines to DEFRA/ DECC's GHG conversion factors for company reporting Annex 6l

Emission source	Methodology	Factor		Factor source
General municipal waste	All building bins measured to calculate bin volume, multiplied by the number of annual empties and an estimate of percentage bin capacity used. Outcome × emissions factor.	1.20	t CO ₂ -e/tonne waste	Municipal solid waste from NGA factors 2012, p 76, Table 43
Emissions from fuel extraction and T&D line losses for purchased electricity – Victoria	Usage in kWh obtained from supplier invoice data. Usage data × emissions factor.	0.15	kg CO ₂ -e/kWh	Emissions factor for purchased electricity per Table 40, July 2012 NGA factors
Emissions from fuel extraction and T&D line losses for purchased electricity – South Australia	Usage in kWh obtained from supplier invoice data. Usage data × emissions factor.	0.14	kg CO ₂ -e/kWh	Emissions factor for purchased electricity per Table 40, July 2012 NGA factors
Emissions from fuel extraction and T&D line losses for tenant's share of base building electricity – Victoria	Usage in kWh obtained from landlord's energy-management system or from landlord's invoices and percentage share of net lettable area applied to calculate user's share. Usage data × emissions factor.	0.15	kg CO ₂ -e/kWh	Emissions factor for purchased electricity per Table 40, July 2012 NGA factors
Emissions from fuel extraction and T&D line losses for tenant's share of base building electricity – South Australia	Usage in kWh obtained from landlord's energy-management system or from landlord's invoices and percentage share of net lettable area applied to calculate user's share. Usage data × emissions factor.	0.14	kg CO ₂ -e/kWh	Emissions factor for purchased electricity per Table 40, July 2012 NGA factors

Emission source	Methodology	Factor		Factor source
Freight	<p>Data for kg of product imported from US and UK collected from purchasing records, distances travelled obtained from Google maps based on supplier's location.</p> <p>Tonnes of freight × distance in km = tonnes-km freight measure × uplift factor × radiative forcing factor × emissions factor.</p> <p>As with passenger flights, a 9 per cent uplift factor was applied to allow for inaccuracies of scheduled distances vs actual distances flown and a further uplift factor of 1.9 was applied to allow for radiative forcing.</p>	See below	See below	See below
Freight – long haul international air freight	See above	0.7732	kg CO ₂ -e/tonne-km	2012 Guidelines to DEFRA/ DECC's GHG conversion factors for company reporting Annex 7f
Sea freight – average sea container	See above	0.0191	kg CO ₂ -e/tonne-km	2012 Guidelines to DEFRA/ DECC's GHG conversion factors for company reporting Annex 7g
Natural gas used on-site by landlord as part of base building services	<p>Usage in GJ obtained from landlord's energy-management system or from landlord's invoices and percentage share of net lettable area applied to calculate users share.</p> <p>Usage data × emissions factor.</p>	51.33	kg CO ₂ -e/GJ	NGA factors for natural gas July 2012, p 13, Table 2

Emission source	Methodology	Factor		Factor source
Staff taxi travel	<p>Dollars spent, obtained from financial records and converted into a km-travelled figure using an average \$/km taxi fare based on information from EPA Victoria's Greenhouse Inventory Management Plan: 2007–08 Update Appendix B. Km travelled converted to litres of LPG consumed, based on a consumption conversion factor extracted from same EPA source.</p> <p>Litres of LPG converted into energy consumed using the LPG energy conversion factor per NGA factors July 2012 for post-2004 vehicles p 17, Table 4.</p> <p>Result multiplied by emissions factor for LPG from NGA factors July 2012 for post-2004 vehicles p 17, Table 4.</p>	60.2	kg CO ₂ -e/GJ	Emissions factor for LPG per NGA factors July 2012 for post-2004 vehicles p 17, Table 4
Office paper	<p>Office stationery supplier provided details of reams consumed or obtained from invoices and converted to kg at standard weight of 2.5 kg per ream.</p> <p>Weight × emissions factor.</p>	1.08	kg CO ₂ -e/kg of paper	EPA Victoria Greenhouse Gas emissions factors for office copy paper, May 2011 for imported virgin paper
Landlord-supplied reticulated water use	<p>Usage in litres obtained from landlord's energy-management system and converted into cubic metre percentage share of net lettable area applied to calculate users share.</p> <p>Usage data × emissions factor.</p> <p>For Adelaide office, landlord provided a usage figures in litres.</p> <p>Usage data × emissions factor.</p>	2.34	kg CO ₂ -e/m ³ water	RMIT Centre for Design 2007 as quoted in 'EPA Victoria's Greenhouse Inventory Management Plan: 2008–09 Update', Section V–K

Emission source	Methodology	Factor	Factor source
Publications paper	<p>Publication team provided data of books published, quantity, page count and page weight, which provides weight of paper consumed.</p> <p>Weight of paper × emissions factor.</p>	2.59	<p>kg CO₂-e/kg of paper</p> <p>Research conducted by The Gaia Partnership for Sustainability Victoria as part of a 2009–10 EMS publication audit as approved by Low Carbon Australia</p>
Emissions from fuel extraction for natural gas Victoria	<p>Usage in GJ obtained from landlord's landlord's invoices and percentage share of net lettable area applied to calculate users share.</p> <p>Usage data × emissions factor.</p>	4	<p>kg CO₂-e/GJ</p> <p>NGA factors July 2012, p 69, Table 37</p>

Appendix 4: Detailed emissions inventory 2011–12

Emissions source	Consumption units	Consumption	Co ₂ -e (t)	Proportion of total inventory %
Direct emissions – Scope 1				
Refrigerant leakage	na	na	1	0.0474
Subtotal – Direct emissions Scope 1			1	0.047
Indirect emissions – Scope 2				
Purchased electricity excluding base building	kWh	363,367	396	27.20
Subtotal – Indirect emissions Scope 2			396	27.20
Indirect emissions – Scope 3				
Staff air travel	km	1,548,112	493	33.83
Purchased electricity – tenant’s share of base building use	kWh	276,468	308	21.13
General commercial and industrial solid waste	tonnes	53	63	4.33
Emissions from fuel extraction and T&D line losses for purchased electricity	kWh	363,367	54	3.70
Publications paper	kg	16,943	44	3.01
Emissions from fuel extraction and T&D line losses for tenant’s share of base building electricity	kWh	276,468	41	2.82
Natural gas used on site by landlord as part of base building services	GJ	442	23	1.56
Staff taxi travel (LPG)	kL	10	16	1.07
Freight	tonnes × km	55,484	11	0.75
Landlord supplied reticulated water use	m ³	1,399	3	0.22
Office paper	reams	1,098	3	0.20
Emissions from fuel extraction for natural gas on site by landlord	GJ	442	2	0.12
Co-mingled recyclable waste	tonnes	7	–	0.00
Recycled paper waste	tonnes	5	–	0.00
Subtotal – Indirect emissions Scope 3			1,061	72.75
Total emissions			1,458	100.00
Reduction measures				
Offsets purchased			(1,458)	
Total net emissions			Nil	