National Carbon Offset Standard Carbon Neutral Program

Independent Audit Report

Australian Government

Department of the Environment

SECTION 1 Audit Statement and Audit Findings

Organisation Being Audited

Organisation Name	DEXUS Holdings Pty Limited ("**DEXUS**")
Contact person	Paul Wall
Position title	National Sustainability and Operations Manager
Telephone number	+61 2 9017 1337
Email address	paul.wall@dexus.com
Street address	Level 25, Australia Square, 264-278 George St, Sydney NSW 2000

Carbon Neutral Certification Type

Type of certification (tick all applicable)	☐ Organisation ☐ Product/service ☒ Part of organisation ☐ Event
Description of product / service / event or organisation	DEXUS corporate operations comprising corporate travel for all DEXUS employees and DEXUS corporate tenancies in Sydney (located at Levels 24-26, 264 George Street, Sydney 2000), Melbourne (located at Level 1, 180 Flinders Street, Melbourne 3000 for 101 days of the period and located at Level 16, 385 Bourke Street, Melbourne 3000 for the entire period), and Brisbane (located at Level 21, 12 Creek Street, Brisbane 4000).
Initial or periodic audit	Periodic

Auditor Information

Name of audit organisation	PricewaterhouseCoopers Australia ("**PwC**")
Name of lead auditor	John Tomac
Names of audit team members (if applicable)	Jasminah Woodhouse Alejandro Descarrega Liz Harrowell

Telephone number	+61 2 8266 1330
Email address	john.tomac@au.pwc.com

NCOS Requirement	Confirmation and provide evidence
Lead auditor's NGER registration number	NGER registration number for John Tomac: 0149/2012 Register of auditors is maintained at the Clean Energy Regulator website: http://www.cleanenergyregulator.gov.au/NGER/For-auditors/Register-of-auditors
Is the lead auditor accredited to the international standard ISO 14065:2007?	No

PwC confirms that we are not aware of any actual or perceived conflict of interest in having completed this engagement.

John Tomac confirms that he has not carried out more than four previous NCOS consecutive audits for DEXUS.

pwc

Independent assurance report to the Directors of DEXUS Holdings Pty Limited in connection with its obligations under the National Carbon Offset Standard Carbon Neutral Program for the reporting period 1 July 2014 to 30 June 2015.

You have engaged us to undertake an engagement to provide assurance over DEXUS Holdings Pty Limited ("**DEXUS**") compliance with the National Carbon Offset Standard ("**NCOS**") and the National Carbon Neutral Program Guidelines ("**the Guidelines**") (together "**the compliance obligations**") for the reporting period 1 July 2014 to 30 June 2015 as a result of its participation in the National Carbon Offset Standard Carbon Neutral Program. The compliance obligations and the levels of assurance provided are set out in Table 1 below:

Table 1: Compliance obligations		**Level of assurance**
1.	That the DEXUS Property Group Annual Inventory ("**Annual Inventory**") and Public Disclosure summary ("**PDS**") have been prepared in accordance with the NCOS and the Carbon Neutral Program Guidelines.	Reasonable assurance
2.	That the emissions reductions and Total Scope 1 and Scope 2 emissions reported within Tables 3 and 4 of DEXUS Property Group Annual Inventory have been prepared in accordance with the Methodology described within the Annual Inventory.	Reasonable assurance
3.	That the Total Scope 3 emissions reported within Table 4 of DEXUS Property Group Annual Inventory has been prepared in accordance with the Methodology described within the Annual Inventory.	Limited assurance

Sections 3 and 4 of this document contain findings in relation to specific obligations under NCOS. Our assurance opinion is, however, solely contained in this assurance report.

Management's responsibility

Management of DEXUS ('**Management**') is responsible for:

- the preparation and presentation of the Annual Inventory and PDS;
- designing, implementing and maintaining internal controls relevant to the achievement of its compliance obligations; and
- making estimates that are reasonable in the circumstances in relation to its calculation of emissions.

Our responsibility

Our responsibility is to express an opinion on the compliance obligations for the period 1 July 2014 to 30 June 2015 based on the evidence we have obtained and to the level of assurance described above.

We conducted our assurance engagement in accordance with the following Australian standards on assurance engagements:

- Standard on Assurance Engagements ASAE 3000 *Assurance Engagements other than Audits or Reviews of Historical Financial Information* ('**ASAE 3000**');
- Standard on Assurance Engagements ASAE 3100 *Compliance Engagements* ('**ASAE 3100**'); and
- Standard on Assurance Engagements ASAE 3410 *Assurance Engagements on Greenhouse Gas Statements* ('**ASAE 3410**').

Our assurance engagement was undertaken during the period from 14 August 2015 to 30 October 2015.

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Reasonable assurance involves performing procedures to obtain evidence about compliance with the compliance obligations. The nature, timing and extent of procedures selected depend on auditor judgement, including the assessment of risks of material non-compliance, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to management's compliance obligations, in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of internal controls.

Limited assurance is substantially less in scope than a reasonable assurance under Australian standards on assurance engagements. Consequently, the nature, timing and extent of procedures for gathering sufficient appropriate evidence for compliance obligations subject to limited assurance are deliberately limited relative to the compliance obligations subject to reasonable assurance.

An assurance engagement also includes evaluating the reasonableness of estimates and assumptions made by management, as well as evaluating the overall presentation of the Annual Inventory and PDS.

We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusion.

Our independence and quality control

We have complied with the relevant ethical requirements relating to assurance engagements, which include independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence, due care, confidentiality and professional behaviour.

Furthermore, PricewaterhouseCoopers Australia maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements in accordance with *Australian Standard on Quality Control 1 Quality Control for Firms that Perform Audits and Reviews of Financial Reports and Other Financial Information, and Other Assurance Engagements.*

Use of our assurance report

This report, including the conclusion set out below, has been prepared for the sole purpose of reporting on the compliance obligations and is solely for your use and benefit. We assume no responsibility and accept no liability arising out of, or in connection with, any use of, or reliance upon this Report by any other party other than you, or for any purpose other than that for which this report was prepared.

We acknowledge that DEXUS is required to provide our report to the Commonwealth Department of Environment. Otherwise, unless you have our prior written consent or as required by law, you may not include or refer to our assurance report in any public document, including any offer to members or other third parties (including the public generally).

Inherent limitations

There are inherent limitations in performing assurance - for example, assurance engagements are based on selective testing of the information being examined - it is possible that fraud, error or non-compliance may occur and not be detected. An assurance engagement is not designed to detect all instances of non-compliance with the compliance obligations, because such an engagement is not performed continuously throughout the period being examined, and because the procedures performed are undertaken on a test basis. The conclusion expressed in this report has been formed on the above basis.

Additionally, non-financial data may be subject to more inherent limitations than financial data, given both its nature and the methods used for determining, calculating and sampling or estimating such data. Qualitative interpretations of relevance, materiality and the accuracy of data are subject to individual assumptions and judgments.

Summary of procedures undertaken

The procedures conducted in our assurance engagement included:

- Performing enquiry procedures with management to confirm the completeness of emission sources included in calculations as described within the Annual Inventory;
- Agreeing a sample of activity data used in calculating emissions to source documentation;
- Agreeing a sample of emissions factors and methodology references contained within the Annual Inventory to source documentation;
- Agreeing a sample of carbon offsets reported as retired to supporting documentation;
- Assessing the application of methods described within the Annual Inventory in the calculation of reported emissions;
- Agreeing a sample of information reported within the PDS to that reported within the Annual Inventory; and
- Assessing compliance with NCOS and the Guidelines as presented in Sections 3 and 4 of this Independent Audit Report template.

Our conclusions

In our opinion, Management's emissions reductions and Total scope 1 and scope 2 emissions included in the Annual Inventory and the PDS, have been prepared, in all material respects, in accordance with NCOS, the Guidelines and the Methodology described within the Annual Inventory.

Based on our procedures performed, which do not comprise an audit, nothing has come to our attention that would lead us to believe that the Total scope 3 emissions included in Table 4 of the Annual Inventory have not been prepared, in all material respects in accordance with NCOS, the Guidelines and the Methodology described within the Annual Inventory.

PricewaterhouseCoopers

PricewaterhouseCoopers Australia

John Tomac

John Tomac
Partner

Sydney
30 October 2015

Recommendations

Our opinion is unqualified and we do not have any recommendations for DEXUS.

Limitations on Use

This Audit Statement has been prepared for the management of the NCOS Carbon Neutral Program participant and for review by the Department of the Environment, solely for use in relation to the NCOS Carbon Neutral Program. We disclaim any liability for reliance upon this Report by any other party or for any other purpose other than that for which it was prepared.

Confirmation of Audit Findings

Name of lead auditor	John Tomac
Position of lead auditor	Partner
Signature of lead auditor	John Tomac
Date	30/10/15

SECTION 2: Life Cycle Assessment

The section is not applicable to DEXUS, as it is seeking to maintain certification for part of the organisation, not a product, under the NCOS CNP.

SECTION 3: Greenhouse Gas Inventory

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Has the GHG Inventory been prepared in accordance with current domestic and international standards? For example: ISO 14064.1:2006, National Greenhouse and Energy Reporting Act and supporting documentation, and Greenhouse Gas Protocol	Yes	We have checked that all material sources within the GHG Inventory have been prepared in accordance with current domestic and international standards. These include: ▪ National Carbon Offset Standard (NCOS): Department of the Environment, Australia ▪ The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition): World Resources Institute and World Business Council for Sustainable Development ▪ National Greenhouse and Energy Reporting (NGER) Act 2007: Clean Energy Regulator, Australia
Has the time period for the GHG Inventory been clearly stated?	Yes	As noted in the PDS on page 3, the reporting period for the GHG Inventory is from 1 July 2014 to 30 June 2015.
3.1 Organisation Description and Boundary		
Has the GHG Inventory base year been correctly identified (i.e., the first year for which the Inventory has been completed)?	Yes	As noted in Annexure 2 of DEXUS Annual Inventory (DEXUS Baseline Recalculation Policy) and in the PDS on page 8 the baseline year is 2011, as this was the first year the GHG Inventory was certified under NCOS.
Has the organisational boundary been transparently documented? The boundary is best displayed diagrammatically.	Yes	The organisational boundary has been transparently documented in the PDS on page 7.

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Does the organisational boundary accurately reflect the operations undertaken by the organisation/part of organisation?	Yes	The organisational boundary accurately reflects the operations undertaken by DEXUS own office tenancies.
Have all exclusions to the organisational boundary been described and justified?	Yes	DEXUS are only seeking certification for the part of the organisation, being certain own office tenancies. As reflected in the diagram of the organisational boundary, the boundary does not include property assets under DEXUS operational control that they do not tenant.
Have the methodologies used to determine the organisational boundary (e.g., "operational control" test) been clearly identified?	Yes	DEXUS operational boundary is simply determined with reference to the certification boundary presented on Page 7 of the PDS.
3.2 Emission Sources		
Have all Scope 1 and Scope 2 sources of emissions from within the organisational boundary been included in the GHG Inventory? This should include emissions from the six GHG's included under the Kyoto Protocol.	Yes	Testing was performed over the scope 1 and scope 2 emission sources reported for each property included within its reporting boundary. No material issues were noted.
Have Scope 3 emission sources within the established organisational boundary been identified?	Yes	Scope 3 emissions within the organisational boundary have been identified within the Annual Inventory in Table 4 and the PDS in Table 1

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Have any Scope 3 emission sources been excluded? If so, are the exclusions clearly stated and justified and the impact of the exclusions been considered?	Yes	The exclusion of certain Scope 3 emissions has been identified in the PDS on page 6 and is appropriately justified. We believe DEXUS have considered the impact of these exclusions and agree with their conclusion that it would not materially affect the overall total emissions.
3.3 Calculation Methodology and Emission Factors		
Have the sources of all information and activity data been clearly documented?	Yes	The sources of information and activity data is clearly documented in Table 4 of the Annual Inventory and is an accurate reflection of the information sources and activity reviewed by us as part of our assurance procedures.
Have Scope 1 and Scope 2 emission factors been sourced from the National Greenhouse Accounts Factors?	Yes	Scope 1 and Scope 2 emission factors have been tested to those contained within the National Greenhouse Account Factors. No material issues were noted.
Have Scope 3 emission factors been sourced from the most current and appropriate source?	Yes	Scope 3 factors have been described in in Table 4 of the Annual Inventory. Testing has been performed over a sample of those factors detailed back to relevant source documentation. No material issues were noted. a
Has the purchase of GreenPower™ and/or the voluntary surrender of GreenPower™ eligible LGCs been correctly taken into account?	Yes	We have sighted DEXUS' NABERS certificate which notes the electricity consumption for Sydney Office and the percentage of that consumption attributed to GreenPower purchased during FY15.

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Have all purchases of NCOS certified carbon neutral products been correctly accounted for? Emissions from NCOS carbon neutral products are zero rated to avoid double counting. Only NCOS certified products can be accepted under the CNP.	Not applicable	No adjustments have been made for carbon neutral products.
Have all assumptions relating to the calculation of greenhouse gas emissions been clearly described and justified?	Yes	All assumptions relating to the calculation of greenhouse gas emissions set out in Part B 'Assumptions and limitations' of the Annual Inventory. No issues were noted in relation to their presentation.
3.4 Emissions Calculations		
Have the emission calculations been quantified correctly for each emission source?	Yes	Testing was performed over a sample of the calculations used to quantify total emissions. No material issues were noted.
Does the sum of all individual emission sources accurately represent the total attributable emissions for the organisation/part of the organisation included within the GHG Inventory?	Yes	The summation of emissions from individual sources to arrive at total emissions was reviewed as part of our procedures. No material errors were noted.

Requirement (Refer to NCOS Section 4.2)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
3.5 Assessment of Uncertainty		
Has uncertainty of Scope 1 emission estimates been assessed in accordance with the National Greenhouse and Energy Reporting (measurement) Determination?	Yes	DEXUS Scope 1 emissions comprise refrigerant leakage emissions. As per Part C 'Calculate uncertainty for scope 1 emissions' of the Annual Inventory, uncertainty of Scope 1 refrigerant emissions have been_calculated in accordance with Chapter 8 of the NGER (Measurement) Determination. The default uncertainty for refrigerant leakage calculated using Method 1 is 30%.
3.6 Base Year Recalculation Policy		
Has the GHG Inventory base year been correctly identified (i.e., the first year for which the GHG Inventory has been completed)?	Yes	The base year has been correctly identified in the PDS as 2011.
Has a base year recalculation policy been included that is consistent with the GHG Protocol and NCOS? Consideration to be given to mergers, divestments, acquisitions, organic growth and decay, insourcing, outsourcing and significance thresholds. NCOS Section 4.2.2 and the GHG Protocol Corporate & Accounting Standard Ch. 5 provide specific guidance.	Yes	DEXUS Base Year Recalculation Policy has been included with Part D of the Annual Inventory has been checked for consistency with NCOS Section 4.2.2 and the Chapter 5 GHG Protocol Corporate & Accounting Standard.

SECTION 4: ADDITIONAL INFORMATION

Requirement (Refer to the NCOS Section 5.1)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Is the information contained in the PDS consistent with the Inventory/LCA? Consideration to be given to total emissions, emission sources, description of boundary and excluded emissions, reporting year, reduction and offsetting activities.	Yes	The following items were specifically cross-checked for consistency between the Annual Inventory and the PDS: ▪ Total emissions ▪ Emission sources ▪ Description of boundary ▪ Emissions inclusions and exclusions ▪ Reporting year ▪ Reduction and offsetting activities. No issues were noted.
4.1 Emissions Reductions		
Has the emissions reduction strategy been adequately described?	Yes	The emissions reduction strategy is adequately described in Part 3 of the Public Disclosure Summary.
Have reduction measures been considered and documented?	Yes	Reduction measures have been considered and documented in Part 3 of the Public Disclosure Summary.
Has the estimated quantity of emissions reductions from each emission reduction measure been stated?	Yes	The estimated quantity of emissions reductions from each emissions reduction measure has been stated in Part 3 of the Public Disclosure Summary.
Has the total estimated quantity of emissions reductions been calculated?	Yes	The total estimated quantity of emissions reductions been calculated in Part 3 of the Public Disclosure Summary and amounts to 47 tonnes of avoided emissions against business as usual practices.

Requirement (Refer to the NCOS Section 5.1)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
4.2 Carbon Offsets		
Are offset quantities and the total offsets cancelled consistent with the total emissions?	Yes	As shown in Section 5 of the PDS, the total of offsets retired is 2,700 tCO2-e, which is greater than total emissions reported of 2,599 tCO2-e.
Are the details, including serial numbers and registry, of the offsets provided?	Yes	For all offsets purchased, details including serial numbers and registry have been provided and have been agreed to the original Carbon Offset Certificate, recorded *in Section 6 Documents Reviewed* of this report.
Has the quantity of offsets banked for future years been clearly stated?	Not applicable	DEXUS has not banked offsets for future years during the current reporting period.
Have details of banked offsets been provided? This should include the offset type and evidence to support the transaction.	Not applicable	As noted above, no offsets have been banked for future years by DEXUS in this reporting period.
Are the offset types cancelled deemed eligible under the NCOS?	Yes	Offset types cancelled are Australian Government Units, International Units and Other Units as per the original Carbon Offset Certificate, which we have checked are deemed to be eligible under Section 3.2 of the NCOS.

Requirement (Refer to the NCOS Section 5.1)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
Has the approach for retiring carbon offsets for the reporting period been stated? Including the offset type, name of registry, and whether the participant plans to forward purchase the abatement?	Yes	DEXUS has clearly stated their approach for retiring carbon offsets in Section 5 Part B of the PDS. This includes DEXUS' strategy of purchasing offsets in arrears at the end of the reporting period. Details of retired offsets, including the offset type and name of registry have been documented.
If offsets are used from earlier periods, have these been adequately described?	Not applicable	No offsets have been used from earlier periods.
4.3 Record Keeping		
Are record-keeping practices adequate?	Yes	No issues were noted with DEXUS' record-keeping practices..
Have the records that are required to be maintained been specified? Participants must also include details of NCOS documents in their records management.	Yes	All appropriate records have been maintained and shared with us for the purposes of our assurance procedures. DEXUS has a robust environmental data system in place to ensure that the greenhouse gas emissions attributable to the organisation are recorded and can be accessed in a timely manner.
Has the person that is responsible for establishing and maintaining the records, and their role, been identified?	Yes	Rob Sims (DEXUS Carbon Reporting and Performance Manager) has primary responsibility for establishing and maintaining the records. He oversees DEXUS enterprise-wide environmental reporting systems and processes and is responsible for ensuring data quality is maintained.

Requirement (Refer to the NCOS Section 5.1)	Finding (Yes, Not applicable, Observation, minor/major CAR)	Explanation of Finding Make reference to appropriate evidence or documentation
4.4 Quality Control Practices		
Has a description of the quality control practices that are in place to ensure that data quality is maintained been provided?	Yes	DEXUS has provided us with detailed documentation around its environmental reporting system and overall quality control practices.
4.5 Trade mark use and Marketing		
Has a detailed register of the use of the NCOS Trade Mark been provided?	Yes	A register of the use of the trademark has been included in Table 1 of the Annual Inventory.
4.6 Participant Declaration		
Has the declaration been completed and signed?	Yes	

SECTION 5: Summary of Corrective Action Requests and Observations

Our audit opinion is unqualified and we do not have any corrective action requests or observations for DEXUS.

Finding	Summary of CAR/ Observation	Reference to Sections Reviewed in Certification Package	Summary of Action Taken to Address the CAR/ Observation (Participant's response and Auditor's conclusion)
Not applicable	None noted.		

SECTION 6: Documents Reviewed

This section must be completed for all audits. This section provides details of the documents reviewed by the Auditor during the audit, not limited to NCOS CNP-specific documents.

Name or Description of Document	Document Title / Filename	Author and Date Prepared, and Version if Applicable
National Carbon Offset Standard Carbon Neutral Program Annual Inventory / LCA	2015 DEXUS NCOS Annual GHG Inventory v5 (final) 30_10_2015	Rob Sims, DEXUS Sustainability Reporting and Performance Manager, 30 October 2015.
National Carbon Offset Standard Carbon Neutral Program Public Disclosure Summary	2015 DEXUS NCOS Public Disclosure Summary v5 (final) 30_10_2015 (signed)	Rob Sims, DEXUS Sustainability Reporting and Performance Manager, 30 October 2015.
Background & Methodology for Input-Output Analysis - Annexure 1 of the NCOS CNP Annual Inventory	Annexure 1 - PA IO Background & Methodology v2	Dr Michael du Plessis and Christopher Wilson of Pangolin Associates (Sustainability, Energy & Carbon Management), 10 October 2015, Version 2.
Pangolin Associates Methodology & References for Dexus Scope 3 Greenhouse Gas Emissions FY2014/15	DEXUS NCOS GHG Emissions Model FY15 v6 (final) 23_10_2015	Christopher Wilson, Dr David Ross and Dr Adina Cirtog of Pangolin Associates (Sustainability, Energy & Carbon Management), 12 October 2015, Version 1.
DEXUS Resource Consumption Data Collation and Reporting, Methodology and Process, 1 July 2014 to 30 June 2015	DEXUS Resource Consumption Data Collation and Reporting, Methodology and Process, 1 July 2014 to 30 June 2015	Rob Sims, DEXUS Sustainability Reporting and Performance Manager, 31 July 2015, Version 4.
DEXUS NCOS GHG Emissions Calculations FY15	DEXUS NCOS GHG Emissions Model FY15 v6 (final) 23_10_2015	Rob Sims, DEXUS Sustainability Reporting and Performance Manager, 23 October 2015, Version 6.
DEXUS Emissions Savings Calculations FY15	NCOS - FY15 Savings figures v2 (final) 23_10_2015	Rob Sims, DEXUS Sustainability Reporting and Performance Manager, 23 October 2015, Version 2.

National Carbon Offset Standard
Carbon Neutral Program
Public Disclosure Summary

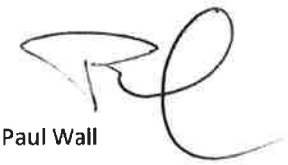
An Australian Government Initiative

DEXUS Property Group

2014/15

Declaration

To the best of my knowledge, the information provided in this Public Disclosure Summary is true and correct and meets the requirements of the National Carbon Offset Standard Carbon Neutral Program.

[Sign here]	[Date]
	30-10-15

Paul Wall

National Sustainability and Operations Manager

Type of carbon neutral certification: Part of an organisation – DEXUS Corporate Operations comprising corporate travel for all DEXUS employees and DEXUS corporate tenancies in Sydney (located at Levels 24-26, 264 George Street, Sydney 2000), Melbourne (located at Level 1, 180 Flinders Street, Melbourne 3000 for 101 days of the period and located at Level 16, 385 Bourke Street, Melbourne 3000 for the entire period), and Brisbane (located at Level 21, 12 Creek Street, Brisbane 4000)

Verification

Date of most recent external verification/audit:

Auditor: Pricewaterhouse Coopers

Auditor assurance statement link:

Australian Government
Department of the Environment

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Template Version: 3 June 2015 v.5

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1. About DEXUS Property Group

DEXUS Property Group is one of Australia's leading real estate groups, investing directly in high quality Australian office and industrial properties. With $19.1 billion of assets under management, DEXUS also actively manages office, industrial and retail properties located in key Australian markets on behalf of third party capital partners.

DEXUS manages a portfolio of 4.3 million square metres located predominantly across Sydney, Melbourne, Brisbane and Perth and is the largest owner of office buildings in the Sydney CBD, Australia's largest office market.

With nearly 30 years of expertise in property investment, development and asset management, the Group has a proven track record in capital and risk management, providing service excellence to tenants and delivering superior risk-adjusted returns for its investors.

DEXUS aims to maximise resource efficiency and minimise the overall environmental impact of operations. This approach is applied in the development of new properties and in the management and refurbishment of existing properties.

DEXUS has a proud record of developing and implementing leading practices in CR&S. As a responsible property investor, manager and developer, DEXUS integrates CR&S objectives across the property lifecycle to create long term value for its stakeholders including tenants, employees, investors, suppliers, community and the environment.

Experience has demonstrated that a holistic approach – from the boardroom to the plant room – reduces operating costs, enhances property values and improves tenant appeal, resulting in enhanced long term returns for investors together with lower environmental risks.

DEXUS adopts a balanced approach to addressing environmental, social and governance (ESG) issues. The Group utilises a CR&S framework through which it systematically identifies, quantifies and responds to ESG issues within strategic decision making and operations. For example, the DEXUS conducts ESG due diligence for property transactions, applies technology and operational expertise to reduce resource use and greenhouse gas emissions, partners with like-minded suppliers, and promotes diversity, equality and basic human rights.

As a signatory to the United Nations Principles of Responsible Investment (UNPRI), DEXUS has a commitment to invest responsibly and raise awareness of responsible investment with its stakeholders. In recognition of the UNPRI, DEXUS delivers CR&S benefits, keeping four guiding values at the forefront of its business:

- Investing responsibly, managing properties and consolidating property services
- Achieving positive environmental outcomes through business operations
- Identifying material issues through stakeholder engagement
- Delivering responsible outcomes for the community

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The Group's commitment to sustainable performance has been recognised through the inclusion in a number of global benchmarks, including:

- Dow Jones Sustainability Index (World, Asia Pacific and Australia Indices)
- FTSE4Good Index
- Carbon Disclosure Project
- Global Real Estate Sustainability Benchmark

DEXUS is a founding member of the City of Sydney's Better Buildings Partnership and a member of the Investor Group on Climate Change.

2. Carbon neutral information

Carbon neutral certification

DEXUS is a signatory to Australia's Carbon Neutral Program which is administered by the federal Department of the Environment. Each year the Group develops an emissions inventory in line with the program's National Carbon Offset Standard (NCOS) across its Corporate Operations.

The Group has offset direct emissions from refrigeration and electricity usage and indirect emissions generated by waste to landfill, paper use, airline travel and car mileage for national employees, taxi travel, hire cars and employee commuting.

DEXUS's NCOS carbon footprint

DEXUS has prepared a greenhouse gas emissions inventory for the 2015 reporting period from 1 July 2014 to 30 June 2015.

Boundary and consolidation approach

DEXUS's NCOS boundary includes DEXUS corporate operations, which comprises facilities listed below that fall under DEXUS's operational control for all or part of the 2015 reporting period. The boundary also includes Scope 3 emissions relating to corporate travel for all DEXUS employees.

DEXUS has applied the principles contained within the National Greenhouse and Energy Reporting Act 2007 and its associated guidelines to determine the operational control of its properties across Australia and New Zealand.

Where DEXUS has operational control of a tenancy, it reports 100% of energy, water, waste and emissions applicable to that tenancy as well as an area-based proportion of base building operations.

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DEXUS 2015 NCOS boundary includes:

- DEXUS office tenancies and proportion of base building services attributable to those tenancies, for the following locations:
  - Sydney Office: Levels 24-26, 264 George Street, Sydney 2000
  - Former Melbourne Office: located at Level 1, 180 Flinders Street, Melbourne 3000 for 101 days of the period
  - New Melbourne Office: Level 16, 385 Bourke Street, Melbourne 3000 for the entire period
  - Brisbane Office: Level 21, 12 Creek Street, Brisbane 4000
- Corporate travel and employee commuting for all staff employed directly by DEXUS nationally

The boundary excludes DEXUS's owned and managed investment property portfolio comprising office, retail and industrial properties.

Inventory standards and methods

DEXUS's methods and procedures for collecting, collating and calculating its greenhouse gas emissions and resource consumption are prepared in accordance with the following reporting standards:

- National Carbon Offset Standard (NCOS): Department of the Environment, Australia www.environment.gov.au
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition): World Resources Institute and World Business Council for Sustainable Development (www.ghgprotocol.org)
- National Greenhouse and Energy Reporting (NGER) Act 2007: Clean Energy Regulator, Australia www.cleanenergyregulator.gov.au

Emission factors and calculation methodology

Activity data has been collected from key data sources including utility invoices, reports provided by key suppliers (such as travel providers) and internally generated consumption reports (such as financial reports of expenses claimed).

Where possible, the emission factors and calculation methodologies have been taken from National Greenhouse Accounts (NGA) Factors, dated July 2014, which is aligned with Method 1 within NGER.

Where additional detail is required, DEXUS has used a number of other credible sources including 2015 Guidelines to Defra / DECC's 2015 Government GHG Conversion Factors for Company Reporting, June 2015; EPA Victoria Paper note, May 2011; and ABS Survey of Motor Vehicle use, 12 months ended 31 October 2012.

Greenhouse gases included within inventory

DEXUS has determined its emissions resulting from the common greenhouse gases reported under the Kyoto Protocol, being carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6).

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Emissions are aggregated into carbon dioxide equivalents (CO_2-e) using factors called global warming potentials (GWPs).

Emission sources within certification boundary -quantified sources

Table 1 lists the quantified emission sources that DEXUS has included within its 2015 NCOS greenhouse gas inventory.

Table 1. 2015 Quantified emissions sources

Scope	Quantified emission source	Data collection source
1 & 2	Tenancy electricity and gas consumption and associated transmission and distribution losses	Metered and invoiced by utility providers
3	Share of base building electricity and gas consumption and associated transmission and distribution losses	Metered and invoiced by utility providers
1	Tenancy refrigerant leakage	Estimated using default leakage rates of total equipment charge provided from facility managers and maintenance service providers
3	Share of base building refrigerant leakage	Estimated using default leakage rates of total equipment charge provided from facility/centre managers and maintenance service providers
3	Waste to landfill	Data provided by waste contractors
3	Office paper consumed	Data provided from facility managers
2	Onsite energy generation and purchase of renewable electricity	Data sourced from sub metering systems and GreenPower tracking spreadsheets
3	Corporate air travel	Data provided by DEXUS's outsourced travel booking provider
3	Corporate land based transport	Determined from invoices and transactions processed and paid via the DEXUS accounts payable system
3	Employee commuting	Collected directly from DEXUS employees via survey
3	Hotel accommodation	Determined from invoices and transactions processed and paid via the DEXUS accounts payable system
3	Telecommunications	Determined from data relating to annual spend obtained from IT employees
3	Water: Share of base building potable water consumption	Metered and invoiced by utility providers
3	Wastewater: Share of base building wastewater for offsite treatment	Estimated as a proportion of water use (i.e. discharge factor) that metered and invoiced by utility providers

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Table 1. 2015 Quantified emissions sources		
Scope	Quantified emission source	Data collection source
3	Office supplies and stationary	Determined from data relating to annual spend obtained from facilities management employees
3	Postage, courier and freight	Determined from data relating to annual spend obtained from facilities management employees
3	Food and catering	Determined from data relating to annual spend obtained from facilities management employees
3	IT equipment purchases	Determined from data relating to annual spend obtained from IT employees
3	IT data warehousing	Determined from data relating to annual spend obtained from IT employees

Non-quantified sources

Table 2 lists Scope 3 emission sources have not been quantified in line with the provisions in the NCOS. The impact of excluding these sources is not expected to materially affect the overall total emissions:

Table 2. 2015 Non-quantified emissions sources		
Scope	Non-quantified emission source	Reason for exclusion
3	Office printing	All internal printing is captured via emissions for paper use, office suppliers, IT and electricity use. External printing is not included as information is difficult to gather. DEXUS will review options to gather data for future reporting.
3	Cleaning services	Cleaning services is not included because the information is difficult to gather relative to estimated size of emissions.
3	Events and meals out	Events and meals out has been excluded as these activities relate to social functions rather than operations activities.

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Diagram of certification boundary

DEXUS has expanded the boundary in this reporting period to also include emissions relating to its recently opened tenancy in Brisbane, as well several Scope 3 emission sources which are highlighted in the diagram below.

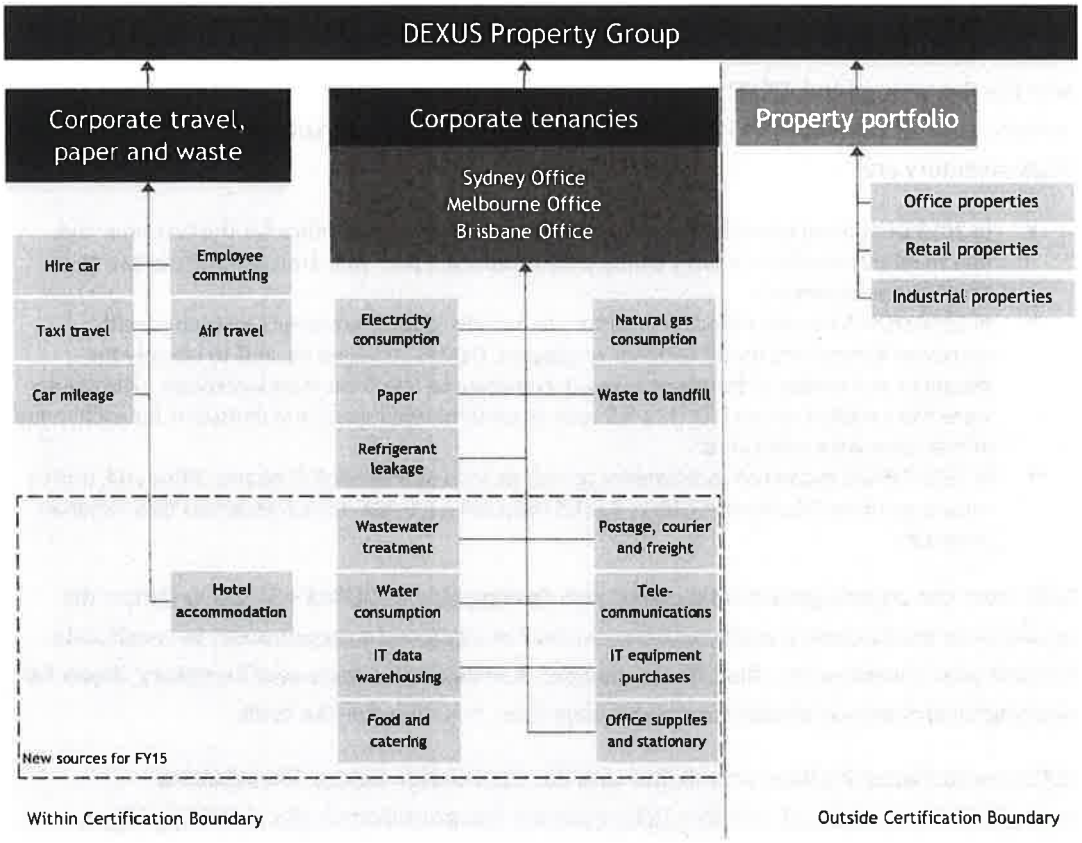

Figure 1: Diagram of the boundary of the subject of certification

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3. Emissions reduction measures

Part A. Emissions over time

DEXUS is a signatory to the Australian Carbon Neutral program and its corporate head office has been certified as carbon neutral since 2011.

Over the five year period, DEXUS has expanded its inventory with regards to boundary and the emission sources covered. The key business events and reporting changes that impact DEXUS's NCOS inventory are:

- In 2013 DEXUS expanded its boundary to include its Melbourne Office for the first time and, due to relocation of the Sydney Office, DEXUS reported part-year emissions across two New South Wales tenancies.
- In 2014 DEXUS has expanded its inventory to include Scope 3 emissions associated with employee commuting for all national employees. DEXUS surveyed its staff to identify the distances and modes of transport taken to commute to and from their workplace. The results were extrapolated across DEXUS's full time-equivalent employees and emissions for each mode of transport were calculated.
- In 2015 DEXUS expanded its boundary to include its newly opened Brisbane Office and, due to relocation of the Melbourne Office, DEXUS reported part-year emissions across two Victorian tenancies.

Aside from the organic growth associated with the opening of DEXUS's Brisbane Office, the expansion of the boundary and emission sources has triggered a requirement to recalculate the base year inventory to reflect these changes. A recalculated base year inventory allows for meaningful comparison of emissions from base year, on a like-for-like basis.

DEXUS recalculated the base year in line with its recalculation policy. The resulting recalculation has increased DEXUS's 2011 emission footprint from 2,165 to 2,561 t.CO_2-e, representing an additional 396 t.CO_2-e.

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Table 3 below summarises DEXUS's like-for-like emissions including its recalculated baseline.

Table 3. Like-for-like emissions since base year (including baseline recalculations and excluding new sources)

	FY11 Base Year	FY12	FY13	FY14	FY15	Change % FY15 vs Base Year
Scope 1	2	2	2	1	1	-62%
Scope 2	415	344	270	233	284	-31%
Scope 3 comprising the following:	2,225	2,312	1,979	1,762	1,916	-14%
tenancies and base building energy/refrigerants	619	603	444	348	431	-31%
office paper use and waste	40	14	221	58	25	-37%
corporate travel	1,202	1,373	1,021	1,009	1,040	-13%
employee commuting	364	322	294	347	420	15%
Avoided emissions from renewable energy purchased by DEXUS	-81	-66	-28	0	-16	
Total like-for-like emissions (t CO_2-e)	**2,561**	**2,593**	**2,223**	**1,995**	**2,186**	**-15%**

A new baseline for FY15

In 2015 DEXUS has renewed its commitment to the carbon neutral program. Using guidance from the Department of Environment, DEXUS has reviewed its reported Scope 3 sources and has committed to expanding its boundary from 2015. The new boundary includes the following Scope 3 sources reported for the first time:

- Hotel accommodation
- Telecommunications
- Water: Share of base building potable water consumption
- Wastewater: Share of base building wastewater for offsite treatment
- Office supplies and stationary
- Postage, courier and freight
- Food and catering
- IT equipment purchases
- IT data warehousing

DEXUS has purchased and retired offsets for these additional sources in 2015.

Part B. Emissions reduction strategy

DEXUS Property Group is committed to continuous improvement under the ISO 14001 Environmental Management System which includes reducing resource consumption and the impact of climate change across the entire portfolio including DEXUS's corporate operations.

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This is the Group's fifth reporting year under the NCOS Carbon Neutral Program, with a solid track record and carbon emissions reduction results as part of the ongoing resource monitoring, management and reporting framework.

The first reporting year under NCOS, FY11, which is also the base year, allowed DEXUS to communicate the footprint across the organisation. This year, DEXUS has recalculated the base year in line with the Base Year Recalculation Policy, dated July 2012; to allow comparison of emissions from base year, on a like-for-like basis.

DEXUS's emissions reduction strategy takes the form of a 'Tenancy Sustainability Plan'. The plan outlines key strategies, objectives and targets for a more sustainable office and is focused on six key areas which include liveability, information technology, office consumables and recycled content procurement, office energy consumption, recycling and waste and internal processes.

Part C. Emissions reduction actions

Over the last five years of DEXUS's involvement in the Carbon Neutral Program, DEXUS has achieved a total emissions reduction of 15% against its like-for-like recalculated baseline.

During that time DEXUS has also experience organic growth in the Group's full-time equivalent staff, which has increased from 289.5 FTEs to 334.0 FTEs, or 15%.

As a result, DEXUS has achieved a 26% reduction in emissions intensity per employee, which equates to 770 tonnes CO_2-e of avoided emissions in 2015 against the 2011 baseline.

Emissions intensity peaked in 2012 at 10.1 tonnes CO_2-e per employee as DEXUS's restructured its workforce and from 2013 emissions intensity has continued to improve following the implementation of DEXUS's Tenancy Sustainability Plan.

Table 4. Like-for-like emissions intensity since base year

	Base Year	FY12	FY13	FY14	FY15	Change % FY15 vs Base Year
Scope 1 & 2	336	280	244	233	270	-20%
Scope 3	2,225	2,312	1,979	1,762	1,916	-14%
Total like-for-like emissions	**2,561**	**2,593**	**2,223**	**1,995**	**2,186**	**-15%**
Employees (FTEs) as at 30 June each year	289.5	256.4	234.0	276.0	334.0	15%
Emissions Intensity (t. CO_2-e/FTE)	**8.8**	**10.1**	**9.5**	**7.2**	**6.5**	**-26%**

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FY15 Projects

In FY15 DEXUS completed the following emissions reductions projects, resulting in 47 tonnes of avoided emissions against business as usual practices.

Table 5. Emissions reduction measures implemented in the current reporting period

Year completed	Emissions source	Reduction measure	Scope	Status	Avoided electricity use (kWh)	Avoided emissions ($t.CO_2$-e)
2015	Tenant Electricity	Purchase of GreenPower for Sydney Office	2&3	Complete	0	16
2015	Tenant Electricity	Expanding the Sydney Office to take up part of Level 24	2&3	Complete	18,132	19
2015	Tenant Electricity	Relocating the Melbourne Office from 180 Flinders Street to 385 Bourke Street	2&3	Complete	8,991	12
Total emission reductions implemented in this reporting period:						**47**

GreenPower purchases

DEXUS implemented a purchase of certified GreenPower at its Sydney Office. DEXUS purchased 15,721 kWh of GreenPower, resulting in direct abatement of 16 tonnes CO_2-e.

Office relocations and refurbishments

Due to DEXUS's increase in employee numbers in FY14 and FY15, DEXUS focused its FY15 emissions reductions activities on:

1. Expanding the Sydney Office to take up part of Level 24
2. Relocating the Melbourne Office from 180 Flinders Street to 385 Bourke Street
3. Formally establishing the Brisbane Office at 12 Creek Street

For each of these fitouts, DEXUS has leveraged design elements that were first adopted in the new Sydney Office in 2013, which was designed to provide a work environment that enables collaboration, flexibility and choice.

The Flexible Work Environment (FWE) model office configuration reinforces the importance of face-to-face communication that is supported by an enhanced technology platform providing the latest communication solutions for faster decision making.

DEXUS's Sydney, Melbourne and Brisbane workspaces feature:

- Centralised recycling

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- Energy efficient T5 task and low voltage
- LED lighting
- Motion sensor meeting room lighting
- Laptop mobility
- Wireless technology
- Secure and robust remote access
- Dual screen monitors for all fixed workstations
- 12 wireless interactive screen display panels
- Follow-me printing on 6 printers (reduced from 18)
- Electronic document management
- Personal storage lockers
- Clean desk policy
- Collaborative telephone and video conferencing technology

Through the above sustainability initiatives, DEXUS has already demonstrated significantly reduced energy consumption and decreased reliance on printing and paper files.

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4. Emissions summary

The table below lists DEXUS Property Group's FY15 gross and net greenhouse gas emissions for its corporate activities as per the stated boundary.

Where GreenPower is used, the total emissions from electricity are provided in the table for the total gross emissions and then the emissions from GreenPower are subtracted to calculate the net footprint. The total net emissions represent the amount of offsets required to achieve carbon neutrality.

GreenPower and carbon neutral products are separated to allow for tracking across years where GreenPower is not purchased and provide transparency regarding the total number of offsets required.

Table 6. 2015 Emissions Summary

Scope	Emission source	t CO_2-e
1	Refrigerant leakage - tenancy	1
3	Refrigerant leakage - % of base building	7
2	Purchased electricity – tenancy (gross)	284
3	Purchased electricity - transmission and distribution losses (tenancy)	43
3	Purchased electricity – % of base building (gross)	315
3	Purchased electricity – % of base building transmission and distribution losses	47
3	Purchased natural gas – % of base building (gross)	16
3	Purchased natural gas – % of base building transmission and distribution losses	4
3	Transport Fuel – Air Travel	974
3	Transport Fuel – Taxi	33
3	Transport Fuel – Car Mileage	6
3	Transport Fuel – Hire Car	28
3	Transport fuel – Employee Commuting	420
3	Office paper use	8
3	Office waste to landfill	17
3	Telecommunications*	32
3	Water	1
3	Wastewater	2
3	IT Equipment*	80
3	Stationery*	12

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Table 6. 2015 Emissions Summary		
Scope	Emission source	t CO_2-e
3	Data Centre*	53
3	Postage*	4
3	Couriers*	16
3	Hotel accommodation	80
3	Food and catering*	135
Total Gross Emissions		2,615
GreenPower or retired LGCs		-16
Total Net Emissions		2,599

* These Scope 3 emissions have been calculated using the ISA calculator and account for approximately 12.7% of all emissions.

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5. Carbon offsets

Part A. Offsets summary

In order to fully offset its FY15 emissions footprint of 2,599 t.CO_2-e, DEXUS Property Group has purchased and retired certified carbon offsets totalling 2,700 t.CO_2-e, which includes a contingency of 101 t.CO_2-e to be retired as excess for this year.

Table 7 below provides details of purchased offsets and their retirement details.

Table 7. Offsets Summary

Offset type and registry	Year retired	Serial numbers	Quantity
VCU (APX VCS Registry)	2015	4048-173222598-173223397-VCU-003-APX-IN-1-1023-28032011-31122011-0	800
VCU (APX VCS Registry)	2015	2906-127171802-127172201-VCU-008-MER-KH-3-181-01012012-31122012-0	400
VCU (APX VCS Registry)	2015	2657-116668116-116668367-VCU-016-MER-AU-14-587-01032011-29022012-0	252
VCU (APX VCS Registry)	2015	2646-115073773-115074020-VCU-016-MER-AU-14-641-01072011-15042012-0	248
ACCU (Australian National Registry of Emissions Units (ANREU))	2015	Serial range: 3,671,506,124 to 3,671,506,223	100
CER (Australian National Registry of Emissions Units (ANREU))	2015	Serial range: 848,034,973 to 848,035,872	900
Total offsets retired			2,700
Net emissions			2,599
Total offsets held in surplus for future years:			0

Part B. Offsets purchasing and retirement strategy

DEXUS views its investment in carbon abatement projects as part of its overall sustainability approach and an extension of its own emissions reduction activities. DEXUS invests in projects that fall into one or more of the following criteria:

- Carbon abatement projects involving generation of renewable energy or energy from waste, which enables DEXUS to support the transition to cleaner energy sources

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- Carbon abatement projects situated in Australia, which enables DEXUS to support carbon abatement in the geographical region in which DEXUS operates
- Carbon abatement projects that also give back to local communities in the form of income or through other social co-benefits such as improved health or livelihood

DEXUS's offsetting approach involves purchasing and retiring offsets in arrears at the end of each reporting year as follows:

1. DEXUS determines the amount of offsets to retire to encompass its annual emissions inventory for the current reporting year
2. DEXUS applies a contingency to round up its abatement
3. DEXUS partners with a broker to select carbon abatement projects that fit with DEXUS's offsetting goals
4. Certificates are purchased and retired immediately

Part C. Offset projects (Co-benefits)

Table 8 below describes the projects that DEXUS Property Group has chosen to support in FY15.

Table 8. Carbon abatement projects

Project: Tasmania Forestry Project, Australia

Description: This project promotes improved forestry management by bringing groups of local landholders together to protect areas of forest that would have usually been logged.

Co-Benefits:

- Project directly supports the rural community in Tasmania
- Win/win scenario promoting forest protection over logging whilst providing a lucrative income for landholders
- Risk management strategies in place reduce the risk of forests fires in the protected areas

FY15 offsets retired: 500

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Table 8. Carbon abatement projects

Project: Jiangsu Rudong Biomass Power Generation, China

Description: The project adopts biomass direct combustion technology to utilise local surplus biomass residues (mainly, but not exclusively, rice straw, and wheat straw, and cotton stalk) for power generation.

The biomass fuels are collected at the straw-collecting stations at first, and then packed and transported to the project power plant.

The biomass fuels may be stored and then are shredded before being fed into the power generating system and burnt.

Co-Benefits:

- Creates employment opportunities for both the construction and ongoing operation of the biomass project
- Increases support for local farmers giving them financially rewarding options as opposed to discarding their biomass

FY15 offsets retired: 900

Image source: Netherlands Enterprise Agency | Sector report biomass energy Jiangsu Province

Project: Madhya Pradesh Wind Project, India

Description: This project promotes the sustainable development of the wind industry by bringing investors together, with small to medium power requirements, to invest in wind technologies.

The project activity is develop and operate ten 1.5 MW grid-connected wind power generators located at villages within the state of Madhya Pradesh in India.

Co-Benefits:

- Consists of ten x 1.5 MW Wind Turbine Generators (WTGs)
- Estimated to generate 25,529 MWh of clean electricity annually
- Improved standard of living and local employment opportunities for local communities
- Facilitate availability of infrastructure like electricity, roads, medical facilities etc.

FY15 offsets retired: 800

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Table 8. Carbon abatement projects

Project: Fuel-efficient cookstoves, Cambodia

Description: The project was initiated as part of the Cambodian Fuel-wood Saving Project (CFSP), which was created to reduce the wood consumption in Cambodia in order to protect its forest resources. The ultimate goal of the project is to facilitate a nationwide shift from inefficient exploitation of fuel wood to sustainable and efficient biomass use.

Co-Benefits:

- Avoidance of overexploitation of the forests
- Reduction of airborne particles emission and associated respiratory diseases
- Time saving in fire wood collection
- Reduction of purchased fuel costs
- Transfer of technology to indigenous people and creation of employment opportunities.

FY15 offsets retired: 400

Project: Savannah burning, Northern Australia

Description: The project reduces emissions from savannah fires by shifting burning from the late dry season (approximately October - November) towards the early dry season (approximately March - April), and Reducing the area that is burnt each year.

Practices employed by traditional owners, such as controlled savannah burning help control the incidence of large fires occurring during the dry season and decrease the amount of methane and nitrous oxide emissions into the atmosphere.

Careful early dry season burning can reduce fuel loads and create burnt firebreaks in the landscape. Fire breaks alongside roads or watercourses help to reduce the risk of hot fires spreading in the late dry season.

Co-Benefits:

- Reduces air pollutants associated with the combustion of wood and native fuels, such as sulphur and nitrogen oxides, and particulate matter
- Indigenous co-benefits also involve helping to protect sacred sites through appropriate fire management practices, employing local traditional owners as rangers, encouraging the re-introduction of rare or endangered wildlife or simply enabling people to be on country so the younger generation can learn from their elders

FY15 offsets retired: 100

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National Carbon Offset Standard
Carbon Neutral Program
Annual Inventory / LCA

Insert company logo here

An Australian Government Initiative

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DEXUS Property Group

2014/15

Australian Government
Department of the Environment

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1. Use of trade mark

The table below contains a register of DEXUS's use of the NCOS trade mark duringFY15.

Table 1. Trade mark register	
Where used	Logo type
2015 Performance Pack	Certified organisation
DEXUS CR&S website	Certified organisation

2. Changes since last report

The table below describes changes that may have impacted DEXUS's FY15 reporting.

Table 2. Changes in annual reporting since the previous year	
Type of change	Comments
Emissions source changes	DEXUS has applied the draft guidance provided by the Department of Environment, *Proposed approach to Scope 3 for organisations*, and sought to include all sources, listed as 'Core' and 'Recommended for Inclusion'. DEXUS has included sources listed as 'Recommended for Consideration' where feasible. DEXUS has expanded its boundary to include the following sources for the first time: ▪ Hotel accommodation ▪ Office supplies & stationary ▪ Food and catering ▪ Water: Share of base building potable water consumption ▪ IT data warehousing ▪ Telecommunications ▪ Postage, courier and freight ▪ IT equipment purchases ▪ Wastewater: Share of base building wastewater for offsite treatment
Method changes	None. DEXUS has not changed any calculation methods for previously reported sources. DEXUS has introduced new methods for the sources listed above.
Data quality changes	None. During FY15 DEXUS transitioned its environmental data to a centralised Environmental Reporting System however the underlying data sources have not changed.
Boundary changes	Boundary has expanded in FY15 DEXUS has expanded its boundary to encompass its "Australian Corporate Operations' and now includes DEXUS's Brisbane Office which opened in 2014.
Output changes (growth/decline)	Growth in full-time equivalent employees DEXUS has experienced 15% organic growth in its workforce over the last 5 years, which has somewhat negated the impact of its emissions reduction measures. Despite this emissions have reduced by 15% against DEXUS's FY11 baseline.

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3. Emissions reduction measures

Table 3 below lists the emission reductions achieved. Including a description of how the amount was calculated.

Table 3. Emissions reduction measures implemented in the current reporting period

Year completed	Emission source	Reduction measure and calculation method	Scope	Status	Reduction t CO_2-e
2015	Tenant Electricity	**Purchase of GreenPower for Sydney Office** The emission reduction is the amount of GreenPower purchased (measured in kWh), multiplied by the Scope 2 and 3 emissions factors for NSW (0.86+0.13=0.99 kgCO2-e/kWh), as published in the National Greenhouse Accounts Factors Workbook (July 2014).	2&3	Complete	16
2015	Tenant Electricity	**Expansion of the Sydney Office: Avoided emissions due to the incorporation of energy efficient workplace features during expansion of head office to a tenancy designed to achieve a 4.5 star NABERS Energy rating.** DEXUS staff numbers have steadily increased since DEXUS relocated to its new premises, with an influx of additional staff associated with the acquisition of CPA properties. To accommodate the extra staff DEXUS expanded the Sydney head office during the year to lease an additional 500 square metres on Level 24. DEXUS opened its new space on Level 24 in August 2014. The new space has been integrated into the existing tenancy via an internal staircase which serves to reduce energy use associated with lift travel. The new space has been fitted out with the same energy efficiency features as the existing levels. The avoided energy use has been determined by calculating the difference in energy intensity of the additional space on Level 24 (which is separately metered) versus the energy intensity of DEXUS's previous premises at 343 George Street (benchmark year of FY12 – the last year of occupancy).The emission reduction is the amount of avoided electricity use achieved by incorporating the new design features (measured in kWh), multiplied by the Scope 2 and 3 emissions factors for NSW (0.86+0.13=0.99kgCO2-e/kWh), as published in the National Greenhouse Accounts Factors Workbook (July 2014).	2&3	Complete	19

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2015	Tenant Electricity	**Relocation of Melbourne Office: Avoided emissions due to the incorporation of energy efficient workplace features** In 2014 DEXUS relocated its office from Level 1, 180 Flinders Street, Melbourne to Level 16, 385 Bourke Street, Melbourne, completing the relocation in October 2014. For the new fitout, DEXUS has leveraged design elements that were first adopted in the new Sydney Office in 2013, which was designed to provide a work environment that enables collaboration, flexibility and choice. DEXUS's new workspace features include: ▪ Centralised recycling ▪ LED lighting ▪ Laptop mobility ▪ Secure and robust remote access ▪ 12 wireless interactive screen display panels ▪ Electronic document management ▪ Clean desk policy ▪ Energy efficient T5 task and low voltage ▪ Motion sensor meeting room lighting ▪ Wireless technology ▪ Dual screen monitors for all fixed workstations ▪ Follow-me printing on 6 printers (reduced from 18) ▪ Personal storage lockers ▪ Collaborative telephone and video conferencing technology The avoided energy use has been determined by calculating the difference in energy intensity of the new tenancy at 385 Bourke Street versus the energy intensity of DEXUS's previous premises at 180 Flinders Street (benchmark year of FY14 – the last year of occupancy).The emission reduction is the amount of avoided electricity use achieved by incorporating the new design features (measured in kWh), multiplied by the Scope 2 and 3 emissions factors for VIC (1.18+0.15=1.33 kgCO2-e/kWh), as published in the National Greenhouse Accounts Factors Workbook (July 2014).	2&3	Complete	12
Total emission reductions implemented in this reporting period					**47**

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4. Carbon account

Part A. Emission calculations, emission factors and methodologies

The table below lists the emissions sources included within DEXUS's FY15 inventory along with methodology, energy content and emissions factors and activity data.

Table 4. Emissions inventory

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO_2-e
1	Refrigerant leakage - tenancy	Equipment name plates	Leakage rates: National Greenhouse Accounts (NGA) Factors, Table 24, page 49; Greenhouse Warming Potential– IPCC, fourth assessment 2007- Changes in Atmospheric Constituents in Radiative Forcing, Table 2.14, page 212	Not applicable	Commercial air conditioning: leakage rate 9%, Commercial refrigeration: leakage rate 23%	Sydney - L24-26, Australia Square: 0.355kg of R600a, 0.14kg of R404A, 1.085kg of R134A, 0.082kg of NH3. Melbourne - L16/385 Bourke St: 0.05kg of R600a, 0.18kg of R134A. Melbourne - L1/172 Flinders St: 0.295kg of R134A. Brisbane - L21/12 Creek St: 0.05kg of R600a, 0.18kg of R134A.	kg	1

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Table 4. Emissions inventory

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO_2-e
3	Refrigerant leakage - % of base building	Equipment name plates	Leakage rates: National Greenhouse Accounts (NGA) Factors, Table 24, page 49; Greenhouse Warming Potential– IPCC, fourth assessment 2007- Changes in Atmospheric Constituents in Radiative Forcing, Table 2.14, page 212	Not applicable	Commercial air conditioning: leakage rate 9%, Commercial refrigeration: leakage rate 23%	Sydney - Australia Square: 6.2% share of [990kg of R123, 495kg of R22, 337.926kg R134a] Melbourne - 385 Bourke St: 0.6% share of [1289kg of R134a, 1497kg of R123] Melbourne - 172 Flinders St: 33% share of [15.52kg of R22] Brisbane - 12 Creek St: 0.7% share of [1290kg of R134A]	kg	7
2	Purchased electricity – tenancy (gross)	Invoice	Energy indirect: National Greenhouse Accounts (NGA) Factors, Table 5, page 19	0.0036 GJ/kWh	Scope 2 Emission factors: NSW: 0.86 kgCO2-e/kWh VIC: 1.18 kgCO2-e/kWh QLD: 0.81 kgCO2-e/kWh	309,059.3683	kWh	284
3	Purchased electricity - transmission and distribution losses (tenancy)	Invoice	Energy indirect: National Greenhouse Accounts (NGA) Factors, Table 41, page 69	0.0036 GJ/kWh	Scope 3 Emission factors: NSW: 0.13 kgCO2-e/kWh VIC: 0.15 kgCO2-e/kWh QLD: 0.13 kgCO2-e/kWh	309,059.3683	kWh	43
3	Purchased electricity – % of base building (gross)	Invoice	Energy indirect: National Greenhouse Accounts (NGA) Factors, Table 5, page 19	0.0036 GJ/kWh	Scope 2 Emission factors: NSW: 0.86 kgCO2-e/kWh VIC: 1.18 kgCO2-e/kWh QLD: 0.81 kgCO2-e/kWh	357,628.9874	kWh	315

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Table 4. Emissions inventory

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO_2-e
3	Purchased electricity – % of base building transmission and distribution losses	Invoice	Energy indirect: National Greenhouse Accounts (NGA) Factors, Table 41, page 69	0.0036 GJ/kWh	Scope 3 Emission factors: NSW: 0.13 kgCO2-e/kWh VIC: 0.15 kgCO2-e/kWh QLD: 0.13 kgCO2-e/kWh	357,628.9874	kWh	47
3	Purchased natural gas – % of base building (gross)	Invoice	Energy indirect: National Greenhouse Accounts (NGA) Factors, Table 2, page 13	39.3×10^{-3} GJ/m^3	Fuel combustion emission factor: Natural gas (CO2: 51.2, CH4: 0.1, N2O:0.03)	312,289.7423	MJ	16
3	Purchased natural gas – % of base building transmission and distribution losses	Invoice	Energy indirect: National Greenhouse Accounts (NGA) Factors, Table 37, page 67	39.3×10^{-3} GJ/m^3	Scope 3 Emission factors: NSW: 12.8 kgCO2-e/GJ VIC: 3.9 kgCO2-e/GJ	312,289.7423	MJ	4

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Table 4. Emissions inventory

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO_2-e
3	Transport Fuel – Air Travel	Monthly reports on air travel provided by Goldman Travel (travel booking agent) plus additional transactions from DEXUS Accounts ledger	2015 Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting: Methodology Paper for Emission Factors	Not applicable	Factors inclusive of Radioforcing. Domestic: 0.33043 kg CO2e per pkm Short-haul [Economy]: 0.18447 kg CO2e per pkm Short-haul [Business]: 0.27675 kg CO2e per pkm Short-haul [First class]: 0.27675 kg CO2e per pkm Long Haul [Economy]: 0.16830 kg CO2e per pkm Long Haul [Business]: 0.48808 kg CO2e per pkm Long Haul [First Class]: 0.67321 kg CO2e per pkm	Domestic: 1,261,345 pkm Short-haul [Economy]: 925,964 pkm Short-haul [Business]: 49,313 pkm Short-haul [First class]: 0 pkm Long Haul [Economy]: 0 pkm Long Haul [Business]: 727,558 pkm Long Haul [First Class]: 25,599 pkm	Passenger kilometres (pkm)	974
3	Transport Fuel – Taxi	Accounts ledger-collated data from AMEX reports, Cabcharge reports and DEXUS employee reimbursement system	National Greenhouse Accounts (NGA) factors: Table 4, page 17 Fuel combustion emission factors (Transport Fuels) Table 40, page 68: Scope 3 emission factors - liquid fuels and certain petroleum based products	26.2	Fuel combustion emission factor: Liquefied petroleum gas (LPG). Energy content factor (GJ/kL) 26.2, Emission factor (CO2: 59.6, CH4: 0.3, N2O:0.3); Scope 3 emissions factor = 5.0	291,813	$AU	33

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Table 4. Emissions inventory

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO_2-e
3	Transport Fuel – Car Mileage	Car mileage claimed by staff using Preceda systems	National Greenhouse Accounts (NGA) factors: Table 4, page 17 Fuel combustion emission factors (Transport Fuels) Table 40, page 68: Scope 3 emission factors - liquid fuels and certain petroleum based products	34.2	Fuel combustion emission factor: Gasoline (other than or use as fuel in an aircraft). Energy content factor (GJ/kL) 34.2, Emission factor (CO2: 66.7, CH4: 0.6, N2O:2.3); Scope 3 emissions factor = 5.3	20,492.99367	km	6
3	Transport Fuel – Hire Car	Accounts ledger-collated data from AMEX reports and DEXUS staff reimbursement system	National Greenhouse Accounts (NGA) factors: Table 4, page 17 Fuel combustion emission factors (Transport Fuels) Table 40, page 68: Scope 3 emission factors - liquid fuels and certain petroleum based products	34.2	Fuel combustion emission factor: Gasoline (other than or use as fuel in an aircraft). Energy content factor (GJ/kL) 34.2, Emission factor (CO2: 66.7, CH4: 0.6, N2O:2.3); Scope 3 emissions factor = 5.3	50,001.1	$AU	28

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Table 4. Emissions inventory

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO_2-e
3	Transport fuel – Employee Commuting	DEXUS surveyed its staff in June 2014 to collect statistics regarding employee commuting habits	AGO National Greenhouse Gas Inventory – Analysis of Recent Trends and Greenhouse Indicators 1990 - 2005: - Table 12, pg 30: Occupancy, fuel consumption and emissions, passenger vehicles and buses - Table 17, pg 34: Passenger rail activity and greenhouse indicators - Table 16, pg 33: Light rail activity and greenhouse indicators - Table 15, pg 32: Coastal shipping activity and greenhouse indicators National Greenhouse Accounts (NGA) factors- Table 4, page 17 Fuel combustion emission factors (Transport Fuels) Table 40, page 68: Scope 3 emission factors- liquid fuels and certain petroleum based products.	Care and Pool Car: Average litres of Petrol per kilometre travelled (0.109 litres/km) Source: ABS, Survey of Motor Vehicle use, page 14) Energy content factor: Gasoline (other than or use as fuel in an aircraft). Energy content factor (GJ/kL) 34.2	Emission factors for each mode of transport: Walk: 0 kgCO2-e/pkm Bicycle: 0 kgCO2-e/pkm Bus: 0.093 kgCO2-e/pkm Train: 0.124 kgCO2-e/pkm Tram: 0.187 kgCO2-e/pkm Ferry: 0.301 kgCO2-e/pkm Car: 0.2792 kgCO2-e/pkm [=10.9/1000 x 34.2 x (69.6 + 5.3)] Pooled Car: 0.1396 kgCO2-e/pkm	Survey results from 165 respondents have been extrapolated across 334 FTEs for FY15: Walk: 99,981 pkm Bicycle: 46,639 pkm Bus: 456,863 pkm Train: 949,580 pkm Tram: 777 pkm Car: 673,441 pkm Pooled Car: 29,635 pkm Ferry: 61,213 pkm Other: 36,728 pkm Total km per year 2,311,134 pkm	Passenger kilometres (pkm)	420

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Table 4. Emissions inventory

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO_2-e
3	Office paper use	Invoices	EPA Paper note, dated May 2011	Not applicable	Emission Factor: kg x 1.08	A4 reams:1,815; A3 reams: 150	Number of reams	8
3	Office waste to landfill	Waste reports	Other indirect: National Greenhouse Accounts (NGA) Factors, Table 44, page 74 Waste is measured in weight where onsite scales exist. Otherwise waste is measured in volume and converted to weight using contractor-specific factors for each waste stream which are based on sample measurements conducted across the portfolio.	Not applicable	Emission Factor: t x 1.1	15.78772508	Tonnes	17
3	Telecommunications	Financial system	Licensed version of the Input-Output Analysis calculator developed by the Integrated Sustainability Analysis (ISA) Research Team at the University of Sydney (www.isa.org.usyd.edu.au). Industry Allocation: Domestic telecommunication services	n/a	0.16 kgCO2-e/$	204,000	$	32

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Table 4. Emissions inventory

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO_2-e
3	Water	Invoices	Derived from National Performance Report 2012-13 - urban water utilities, Part B; http://www.nwc.gov.au/publications/topic/nprs/npr-2013-urban	n/a	0.232 tCO2-e/ML	3.646822618	ML	1
3	Wastewater	Invoices	Derived from National Performance Report 2012-13 - urban water utilities, Part B; http://www.nwc.gov.au/publications/topic/nprs/npr-2013-urban	n/a	0.423 tCO2-e/ML	3.282140356	ML	2
3	IT Equipment	Financial system	ISA Calculator Industry Allocation: Electrical Equipment	n/a	0.29 kgCO2-e/$	276,000	$	80
3	Stationery	Financial system	ISA Calculator Industry Allocation: Printing & Stationary	n/a	0.39 kgCO2-e/$	30,000	$	12
3	Data Centre	Financial system	ISA Calculator Industry Allocation: Data processing services	n/a	0.17 kgCO2-e/$	312,000	$	53
3	Postage	Financial system	ISA Calculator Industry Allocation: Postal Services	n/a	0.11 kgCO2-e/$	34,992	$	4
3	Couriers	Financial system	ISA Calculator Industry Allocation: Courier Services	n/a	0.40 kgCO2-e/$	39,696	$	16

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Table 4. Emissions inventory

Scope	Emission source	Source of activity data	Methodology reference	Energy content factor	Emission factor	Activity data	Unit	t CO_2-e
3	Hotel Accommodation	Accounts ledger-collated data from AMEX reports and DEXUS staff reimbursement system	Derived from the Commercial Buildings Baseline Study; http://www.industry.gov.au/ENERGY/ENERGYEFFICIENCY/NON-RESIDENTIALBUILDINGS/Pages/CommercialBuildingsBaselineStudy.aspx	n/a	58.2 kgCO2-e/room night	1,375	occupancy nights	80
3	Food and catering	Financial system	ISA Calculator Industry Allocation: Fresh Meat	n/a	6.71 kgCO2-e/$	4,396	$	30
3	Food and catering	Financial system	ISA Calculator Industry Allocation: Confectionery	n/a	0.40 kgCO2-e/$	8,791	$	4
3	Food and catering	Financial system	ISA Calculator Industry Allocation: Vegetable Products	n/a	0.49 kgCO2-e/$	35,165	$	17
3	Food and catering	Financial system	ISA Calculator Industry Allocation: Oats, sorghum and other cereal grains	n/a	2.92 kgCO2-e/$	17,582	$	51
3	Food and catering	Financial system	ISA Calculator Industry Allocation: Dairy Products	n/a	1.15 kgCO2-e/$	17,582	$	20
3	Food and catering	Financial system	ISA Calculator Industry Allocation: Oil & Fats	n/a	0.91 kgCO2-e/$	4,396	$	4
3	Food and catering	Financial system	ISA Calculator Industry Allocation: Spirits	n/a	0.62 kgCO2-e/$	15,000	$	9
Total gross emissions								2,615

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Table 5. Use of GreenPower or RECs		
GreenPower / LGC (RECS)	Volume (in kWh)	Tonnes CO_2-e
GreenPower	15,721	16
LGC (RECS)	0	0
STC (RECS)	0	0
Net emissions		2,599

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Part B. Assumptions and limitations

The table below describes how DEXUS made decisions about data, including assumptions and factors applied in intermediate calculations.

Table 6. Assumptions and limitations of calculation methods

Emission source / activity	Assumption/limitation and justification
Refrigerant leakage (tenancy)	Leakage rates sourced from National Greenhouse Accounts (NGA) Factors: ▪ Commercial air conditioning: leakage rate 9% ▪ Commercial refrigeration: leakage rate 23% Greenhouse Warming Potential (GWP) sourced from IPCC, fourth assessment 2007- Changes in Atmospheric Constituents in Radiative Forcing: ▪ R134a: 1430 ▪ R600a: 0 ▪ R410a: 2087.5 ▪ R123: 77 ▪ R22: 1810 ▪ NH3: 0
Refrigerant leakage (base building)	Leakage rates sourced from National Greenhouse Accounts (NGA) Factors: ▪ Commercial air conditioning: leakage rate 9% ▪ Commercial refrigeration: leakage rate 23% Greenhouse Warming Potential (GWP) sourced from IPCC, fourth assessment 2007- Changes in Atmospheric Constituents in Radiative Forcing: ▪ R134a: 1430 ▪ R600a: 0 ▪ R410a: 2087.5 ▪ R123: 77 ▪ R22: 1810 ▪ NH3: 0
Purchased electricity – tenancy (gross)	Scope 2 emissions from electricity, consumed to light and power the DEXUS corporate tenancies: ▪ Sydney office, located at Levels 24-26, 264 George Street, Sydney (2&1/2 floors for the entire reporting period) ▪ Melbourne office, located at Level 1, 180 Flinders Street, Melbourne for 101 days of the period and located at Level 16, 385 Bourke Street, Melbourne for the entire period ▪ Brisbane Office, located at Level 21, 12 Creek Street, Brisbane 4000 for the entire reporting period Based on data which is provided by supply authority billing from utility meters, (one meter per floor within the tenancies) GreenPower is deducted from the total gross annual consumption (kWh) before applying emission factor and converting to tCO2-e

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Purchased electricity – tenancy. Transmission and distribution losses	Scope 3 emissions from purchased electricity for the tenancies, transmission and distribution losses. Based on data which is provided by supply authority billing from utility meters, (one meter per floor within the tenancies).
Purchased electricity – base building (gross)	Scope 3 emissions from electricity, consumed to light and power the base building of DEXUS corporate tenancies. DEXUS share of base building emission is determined by prorating base building consumption based on occupied floor area: ▪ Sydney office, located at 264 George Street, Sydney (2&1/2 floors for the entire reporting period) , where DEXUS's share of base building is 6.2% ▪ Melbourne office, located at 180 Flinders Street, Melbourne for 101 days of the period, where DEXUS share of base building is 4% ▪ Melbourne office located at 385 Bourke Street, Melbourne for the entire period, where DEXUS share of base building is 0.6% ▪ Brisbane Office, located at 12 Creek Street, Brisbane 4000 for the entire reporting period, where DEXUS share of base building is 0.7% Based on data which is provided by supply authority billing from utility meters
Purchased electricity – base building. Transmission and distribution losses	Scope 3 emissions from purchased electricity for DEXUS share of base building, transmission and distribution losses
Purchased gas – base building (gross)	Scope 3 emissions from natural gas, consumed for generating hot water and space heating for the base building of DEXUS corporate tenancies: DEXUS share of base building emission is determined by prorating base building consumption based on occupied floor area: ▪ Sydney office, located at 264 George Street, Sydney (2&1/2 floors for the entire reporting period) , where DEXUS's share of base building is 6.2% ▪ Melbourne office, located at 180 Flinders Street, Melbourne for 101 days of the period, where DEXUS share of base building is 4% ▪ Melbourne office located at 385 Bourke Street, Melbourne for the entire period, where DEXUS share of base building is 0.6% Brisbane office located at 12 Creek Street, Brisbane does not use natural gas in the office or base building operations Based on data which is provided by supply authority billing from utility meters
Purchased gas– base building. Transmission and distribution losses	Scope 3 emissions from purchased natural gas for DEXUS share of base building, transmission and distribution losses
Transport fuel – air travel	Air travel is booked through a third party travel supplier (Goldman Travel Corp) as per DEXUS travel policy Air travel not booked using Goldman Travel Corp is booked using DEXUS Corporate AMEX credit card. Please refer to DEXUS Travel policy, and DEXUS AMEX policy Great circle distance (km) used to measure distance travelled. Source: Australian Bureau of Infrastructure; Great Circle Mapper website (http://www.gcmap.com/) Flights are categorised by distance. Short haul (under 1,108 km), medium haul

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	(between 1,108 km and 3,700 km) and long haul (more than 3,700 km) Factors used include 8% uplift factor has been applied to take into account non-direct routes (i.e. not along the straight line great circle distances between destinations) and delays/circling Factors used include a radiative forcing index multiple of 1.9 is applied to the total tCO_2 Emissions have been calculated separately for each class of travel (Economy, Business, First Class) based on the category of ticket purchased, as evidenced within the source data
Transport fuel – taxi	Majority of taxi fleet use LPG as primary fuel, therefore assumed all taxi trips take place in LPG-fuelled taxis and extrapolated this data for all business travel in taxis Average litres of LPG per kilometre travelled (0.147 litres/km) (Source: ABS Report 9208.0, dated 31 October 2012) Average fixed costs per cab trip (flag fall) is $3.90 25% of all fares are subject to Rate 2
Transport fuel – car mileage	All business related vehicle travel has been claimed through Payroll system Preceda Average litres of Petrol per kilometre travelled (0.109 litres/km) (Source: ABS Report 9208.0, dated 31 October 2012) DEXUS does not own nor operate fleet vehicles
Transport fuel – hire car	Average car rental $100/day Average km travelled per day 200km Average litres of petrol per kilometre travelled (0.109 litres/km) (Source: ABS Report 9208.0, dated 31 October 2012)
Paper	All A3 and A4 paper purchased assumed to be 80 GSM weight and is purchased in reams Average ream of A4 paper weighs 2.5kg
Office waste to landfill	Waste and recycling weights and volumes are recorded by DEXUS's waste contractors. Where feasible, waste is measured by weight directly, using scales within building loading docks or attached to the waste collection truck. Where waste is measured in volume, it is converted to weight using contractors-specific waste density factors for each waste stream. The factors used are as follows: ▪ 264 George Street, Sydney: direct weight measurement ▪ 385 Bourke Street, Melbourne: direct weight measurement ▪ 12 Creek Street, Brisbane: 104.15 kg/m^3 up to Feb 2015, direct weight measurement from Feb 2015 DEXUS share of base building emission is determined by prorating base building consumption based on occupied floor area: ▪ Sydney office, located at 264 George Street, Sydney (2&1/2 floors for the entire reporting period) , where DEXUS's share of base building is 6.2% ▪ Melbourne office, located at 180 Flinders Street, Melbourne for 101 days of the period, where DEXUS share of base building is 4% ▪ Melbourne office located at 385 Bourke Street, Melbourne for the

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	entire period, where DEXUS share of base building is 0.6% ▪ Brisbane Office, located at 12 Creek Street, Brisbane 4000 for the entire reporting period, where DEXUS share of base building is 0.7%
Water	Scope 3 emissions from supplier water, consumed by base building and directly by building occupants including DEXUS's corporate tenancies: DEXUS share of base building emission is determined by prorating base building consumption based on occupied floor area: ▪ Sydney office, located at 264 George Street, Sydney (2&1/2 floors for the entire reporting period) , where DEXUS's share of base building is 6.2% ▪ Melbourne office, located at 180 Flinders Street, Melbourne for 101 days of the period, where DEXUS share of base building is 4% ▪ Melbourne office located at 385 Bourke Street, Melbourne for the entire period, where DEXUS share of base building is 0.6% ▪ Brisbane Office, located at 12 Creek Street, Brisbane 4000 for the entire reporting period, where DEXUS share of base building is 0.7% Based on data which is provided by supply authority billing from utility meters
Wastewater	Assumed 90% discharge factor on supplied water described above
Hotel accommodation	Source data consists of individual expenses from DEXUS employees collated from AMEX reports. Data has been converted to 'occupancy nights' using the following table of rates which vary according to the type of accommodation, as listed in the AMEX reports.

Accommodation Type	Average cost ($) per occupancy night
BED & BREAKFAST	200
HOTEL	200
HOTEL / APARTMENT	200
HOTEL DELUXE	1,000
HOTEL EXPENSIVE	1,000
HOTEL INTERNATIONAL	500
HOTEL MID-PRICED	200
HOTEL WITH RESTAURANT	400
MOTEL	200
OTHER LODGING	200
RESORT	1,000
SMALL LUXURY HOTEL	300

The emission factor for hotel room nights has been derived from the Commercial Buildings Benchmarking Study (CBBS), a report on baseline energy consumption and greenhouse gas emissions in commercial buildings in Australia published in November 2012.

Table 1.2 on page 3 of Part 1 of the report provides a projection for total greenhouse gas emissions for hotels in 2014 (3.4 $MtCO_2$-e). This figure is then divided by the total square metres of Nett Lettable Area (NLA) for hotels given in table 6.1, p.54 (11,206,000 m^2) to arrive at an emissions intensity per square metre (0.30 tCO_2-e/m^2). Section 6.2 of the report provides a breakdown of the average size of a room in hotels according to star rating. A value of 70 m^2 for a four star hotel was used to determine an intensity of 21.2 tCO_2-e/room/year. Dividing this by 365 days and 1,000 gives a final emissions factor of 58.2 $kgCO_2$-

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<table>
<tr><td></td><td>e/room night.</td></tr>
<tr><td>IT Equipment
Telecommunications
Stationary
Data centre
Postage
Couriers</td><td>Emissions factors have been modelled using 'input-output' analysis using an ISA Calculator developed by the University of Sydney. Refer to Annexure 1 for details of the methodology and application of the ISA Calculator.</td></tr>
<tr><td>Food and catering</td><td>Emissions factors have been modelled using 'input-output' analysis using an ISA Calculator developed by the University of Sydney. Refer to Annexure 1 for details of the methodology and application of the ISA Calculator.
Separate, aggregated figures have been obtained covering expenditure on food and beverages. The total amount purchased for food has been broken down according to the estimated break up below to enable input into the 'input-output' calculator.
<table>
<tr><th>Food sub-category</th><th>Estimated % of total food spend</th><th>Estimated Spend ($)</th></tr>
<tr><td>Meat Products (Beef)</td><td>5%</td><td>4,396</td></tr>
<tr><td>Sugar, Confectionery</td><td>10%</td><td>8,791</td></tr>
<tr><td>Fruit & Veg</td><td>40%</td><td>35,165</td></tr>
<tr><td>Flour and Cereals</td><td>20%</td><td>17,582</td></tr>
<tr><td>Dairy</td><td>20%</td><td>17,582</td></tr>
<tr><td>Margarine, Oil & Fats</td><td>5%</td><td>4,396</td></tr>
<tr><td>All food and catering</td><td>100%</td><td>$87,912</td></tr>
<tr><td>Drinks (Wine & Spirits)</td><td></td><td>$15,000 (itemised separately)</td></tr>
</table></td></tr>
<tr><td>GreenPower purchase</td><td>15.721 MWh GreenPower was purchased for Sydney Office
GreenPower is considered equivalent to the use of renewable energy</td></tr>
</table>

Part C. Calculate uncertainty for scope 1 emissions

Uncertainty in regards to Scope 1: refrigerant leakage emissions have been calculated in accordance with Chapter 8 of the NGER (Measurement) Determination. The default uncertainty for refrigerant leakage calculated using Method 1 is 30%.

Part D. Base year recalculation policy

Over the five year period, DEXUS has expanded its inventory with regards to boundary and the emission sources covered. The key business events and reporting changes that impact DEXUS's NCOS inventory are:

- In 2013 DEXUS expanded its boundary to include its Melbourne Office for the first time and, due to relocation of the Sydney Office, DEXUS reported part-year emissions across two New South Wales tenancies.
- In 2014 DEXUS has expanded its inventory to include Scope 3 emissions associated with employee commuting for all national employees. DEXUS surveyed its staff to identify the distances and modes of transport taken to commute to and from their workplace. The results were extrapolated across DEXUS's full time-equivalent employees and emissions for each mode of transport were calculated.

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- In 2015 DEXUS expanded its boundary to include its newly opened Brisbane Office and, due to relocation of the Melbourne Office, DEXUS reported part-year emissions across two Victorian tenancies.

These changes to DEXUS's NCOS boundary each triggered a requirement to recalculate the base year inventory to provide meaningful comparison of emissions from base year, on a like-for-like basis.

DEXUS recalculated the base year in line with DEXUS's base year recalculation policy described below. Base year emissions were calculated by applying base year emission factors to historical data where available. Data has been adjusted where data limitations exist.

The baseline recalculation policy has NOT been applied to the new Scope 3 emissions that DEXUS has reported for the first time this year, as listed in Table 2. These sources will form part of the new 2015 baseline to apply moving forward.

Base Year Recalculation Policy

The GHG Protocol Corporate Standard requires setting a base year for comparing emissions over time. To be able to compare over time, the base year emissions must be recalculated if any 'significant thresholds' occur.

The base year is FY11 as this was the first year the GHG inventory was certified by Low Carbon Australia under NCOS.

"Significance threshold" is defined as qualitative and/or quantitative criteria used to define any significant change to the data, inventory boundary, methods, or any other relevant factors.

The following cases* occurring at DEXUS Property Group shall trigger recalculation of base year emissions:

- Structural changes that has a significant impact on the base year emissions. These include mergers, acquisitions, divestments, outsourcing and insourcing of emitting activities
- Changes in calculation methodology or improvements in the accuracy of emission factors or activity data that result in a significant impact on the base year emissions data
- Discovery of significant errors, or a number of cumulative errors, that are collectively significant
- Change in reporting boundary, for example expanding the boundary to include additional operations or to include new emission sources.

In the case where a significance threshold is triggered, base year emissions shall be retrospectively recalculated to reflect these changes. DEXUS will recalculate base year emissions by applying base year emissions factors to historical data where available. Data may be adjusted if required or if there are data constraints. Base year recalculations will be applicable for both GHG emissions increases and decreases.

In the case of a significant structural change occurring during the middle of the year, the base year emissions should be recalculated for the entire year, rather than only for the remainder of the reporting period after the structural change occurred. In this case, the current year emissions should be recalculated for the entire year to maintain consistency with the base year recalculation.

In the case of a material change to the calculation methodology or identification of superior data, the base year is recalculated applying the new data and/or methodology. If the more accurate data input may not reasonably be applied, then the change in data source will be acknowledged without recalculation. This acknowledgement should be made in the report each year for transparency.

In the case of organic organisation growth or decline, no recalculation will be required.

*Please note that under the current reporting boundary, structural changes are unlikely to trigger a base year recalculation. A change in the reporting boundary would be the most likely trigger for a base year recalculation outside of significant errors and material changes to calculation methodologies. Significant thresholds may be triggered if DEXUS is to expand or reduce our Head Office NLA by >10%, or in the event that DEXUS may relocate our Head Office premises from 343 George St, Sydney NSW 2000.

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Annexure 1: ISA Calculator Methodology

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Pangolin Associates

Sustainability, Energy & Carbon Management

Background & Methodology

for **Input-Output Analysis**

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Authored by

Dr Michael du Plessis and Christopher Wilson

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1 Introduction

1.1 Issues with Traditional Approaches

Life Cycle Assessment (LCA) in an internationally recognised approach to evaluating the potential environmental impacts of products and services. Environmental impacts cover aspects such as greenhouse gas (GHG) emissions, water use, energy consumption and land disturbance. LCA looks at environmental impacts from raw materials extraction and processing through to end-of-life.

A significant issue with LCA is defining a boundary for the analysis. Whilst the boundaries of scope 1 emissions (e.g. petrol/fuel use) and scope 2 emissions (purchased electricity, heat or steam) are quite clearly defined, accounting for scope 3 emissions (supply chain impacts) is more problematic – it requires an analysis that extends back through many stages of the upstream supply chain. Practical difficulties in defining the organisational boundary have traditionally limited reporting of scope 3 emissions to impacts that can be easily measured (e.g. air travel, paper use, waste). In most cases, significant emission sources throughout the supply chain are regarded as outside the scope of GHG emissions assessments. The complexity and cost of analysing complete supply chains makes a comprehensive bottom-up process or audit based approach for scope 3 analysis impractical.

A technique called input-output analysis overcomes many of these technical problems and allows for comprehensive estimations of GHG emissions related to purchased products and services to be undertaken.

1.2 Input-Output Analysis

Input-output analysis (IOA) is an economic accounting technique invented by Wassily Leontief for which he received a Nobel Prize in 1973. It shows how the output of one industry becomes the input of another. From an input-output table you can see what everyone needs from everyone else – you know everyone's production recipe. Input-output analysis can tell you, for example how many cents worth of iron ore is needed to make the steel that made the machine that processed the wood to make the paper bought by your organisation. It draws no boundary and accounts for entire supply chains throughout economies.

Reporting Scope 3 emissions would normally require organisations to survey their entire supply chains and the supply chains of their suppliers; a complex and expensive problem for most organisations. In a traditional LCA, the boundary of the analysis must be defined in accordance with relevant impacts to consider. Usually these are activities that they have control over like employee travel and purchased items such as office paper and materials. This approach only considers a limited number of supply chain GHG emissions and may exclude up to 80% of the rest.

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The Integrated Sustainability Analysis (ISA) research group at The University of Sydney has developed a solution to this problem by modelling supply chain emissions throughout the economy using input-output analysis. This approach automatically carries out a complete upstream life-cycle assessment of emissions using sales and expenditure data downloaded from an accounting system.

The ISA methodology is based on a model of the Australian economy using Australian Bureau of Statistics (ABS) data that traces every one of an organisations purchases through their supplier, the supplier of their supplier, the supplier of the supplier's supplier and so on in an infinite chain of interactions. To assess all these suppliers' impacts manually is impossible. The ISA methodology and software account for the impacts of all suppliers. The ISA model provides consistency of reporting because there is no cut-off point or imposed boundary.

The approach of the ISA is to tackle the issues raised by compiling meaningful Triple Bottom Line (TBL) reports through the lens of embodied energy analysis. This utilises the structure and function of the economic system as described in the national input-output tables to derive energy pathways and dependence of the whole set of economic sub-systems (or sectors) that make up an economy. This structure is best depicted as an ever-expanding "tree of dependence" that contains contains chains of linkages from a particular sector or institution to a wide range of upstream sectors. Figure 1.1 below shows how a particular requirement for a good or service can cascade from one or two suppliers at the first layer of dependence into thousands of potential suppliers.[1]

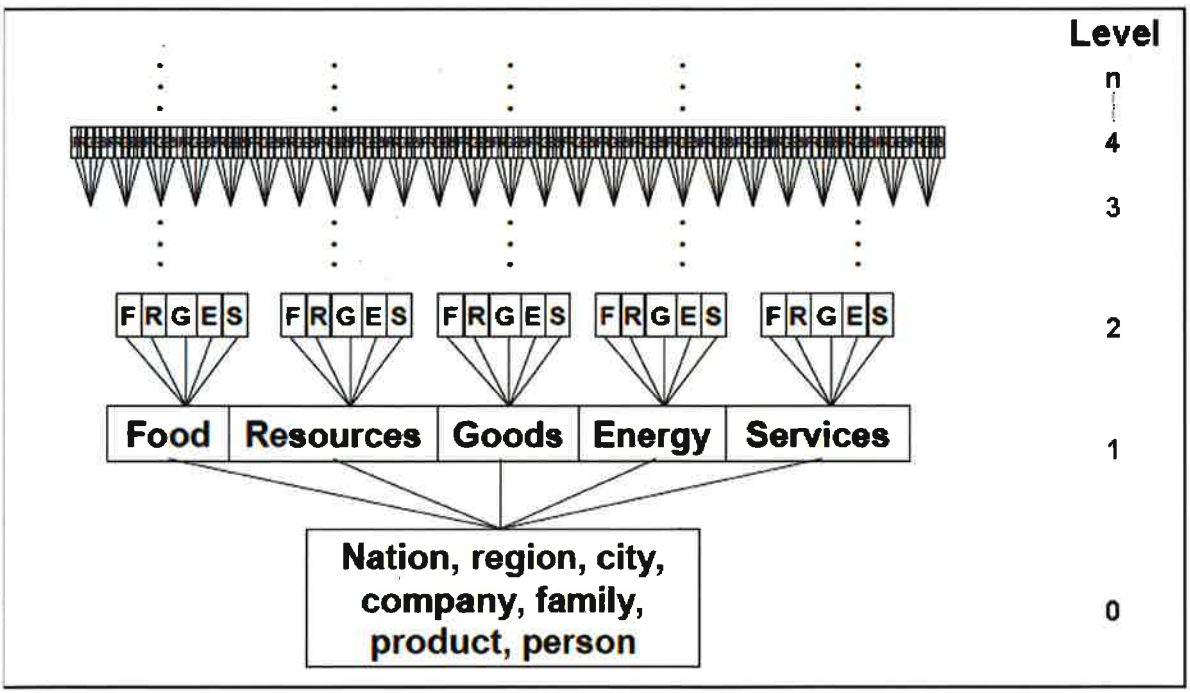

Figure 1.1 The ever expanding tree of dependence[1]

1 Foran, B. Lenzen, M. Dey, C. Bilek, M. (2002) A novel TBL initiative, ISA Research Paper 01-02. University of Sydney

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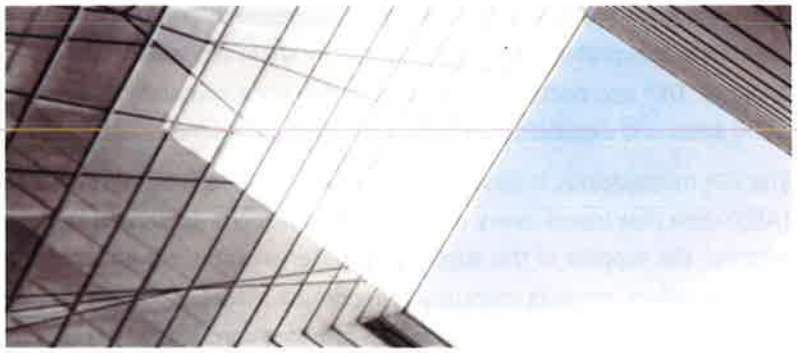
2 Hybrid LCA and Scope 3 Analysis



2.1 Top down approach

Using the ISA model, all that is needed to calculate a scope 3 carbon footprint is a download of an organisation's expenses and revenue from the accounting system. After allocating each expenditure item to the ABS industry categories in the model, the carbon emissions 'embodied' in purchases can be calculated. For example, if $100 is spent on paper, the ISA methodology calculates how much CO_2-e is typically 'embodied' in $100 worth of paper produced by the paper industry. This is called a top down approach.

Input-output analysis will give a complete boundary-free result, covering millions of supply chain paths. It will have some inaccuracies because it uses ABS industry sector averages to calculate an organisation's share of the sector's carbon emissions. However these inaccuracies are minor compared with those of an audit or a traditional process analysis LCA, which cannot possibly follow every one of the millions of supply chain paths fanning out upstream from each purchase that is made. An IOA will always capture more of the inputs than a process LCA, which does the job manually.

2.2 Hybrid approach: top down plus bottom up

Input-output analysis provides a full carbon inventory which shows where the emissions come from in the supply chain. It then allows a more detailed investigation of the more intensive emission sources. This is when a more detailed 'bottom-up' traditional process LCA can be undertaken on a limited number of high emission sources, combining the two is called a hybrid analysis. A hybrid approach combines the completeness of coverage allowed for with an input-output analysis with the on-the-ground specificity of a process LCA. It is a logical combination of the approaches and one that produces much more consistent results and cost effective outcomes than a full bottom up process LCA, representing the best of both worlds.

Benchmarking

One of the advantages of input-output analysis is that, because no boundary is drawn it produces consistent and repeatable results and therefore provides real and durable benchmarks. The ISA model is based on ABS data for the Australian economy and also allows comparison between companies based on average performance within a certain economic sector.

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3 Application of the ISA Calculator

The ISA Triple Bottom Line (TBL) tool is a Microsoft Excel-based calculator developed by the ISA group at the University of Sydney. This software can be used to calculate a full scope 3 supply chain carbon footprint for an organisation and product or service simply by inputting the organisation's expenditure and revenue accounts.

Expenditure (or purchasing) data forms the bulk of the data input. The software calculations deal with generic Australian National Accounts categories therefore the expenditure categories for the organisation have to be converted into Australian National Accounts categories

This is one of the great strengths of the ISA methodology that sits behind the software. It uses freely available National Accounts data to provide benchmarks for around 345 sectors of the Australian national economy.

Expenditure list Note: do not filter, sort or re-orde

Account No.	Account Descriptor	Amount (2014-15 $)	Comment
0	Accommodation	3,762.48	
1	Relocation costs	218.49	
2	Other Transport Australia	8,737.80	
3	Other Transportation - Other	120.78	
4	Travel Insurance	393.86	
5	Advertsing & Marketing	18,557.92	
6	Advisory Services	11,656.09	
7	Annual Fundraiser Expenses	25,800.03	
8	Audit Fees	16,750.00	
9	Bank & PayPal charges	3,180.56	
10	Books and Publications	225.92	
11	Computer & IT	1,646.05	
12	Conference & Seminars	5,760.18	
13	Dues and Subscriptions	12,876.83	
14	Equipment-rental	2,117.40	
15	Insurances	17,439.73	
16	IT support - General	1,065.00	
17	IT Support - GR Fern	1,250.00	
18	IT Support - GR HTN Add Sup	10,860.00	
19	IT Support - GR HTN Monthly	16,956.00	
20	IT Support - Salesforce CRM	23,926.49	
21	Legal Fees	538.28	
22	Meetings,study tours & exchange	1,617.38	

Figure 3.1 Example of input data list

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3.1 Structure

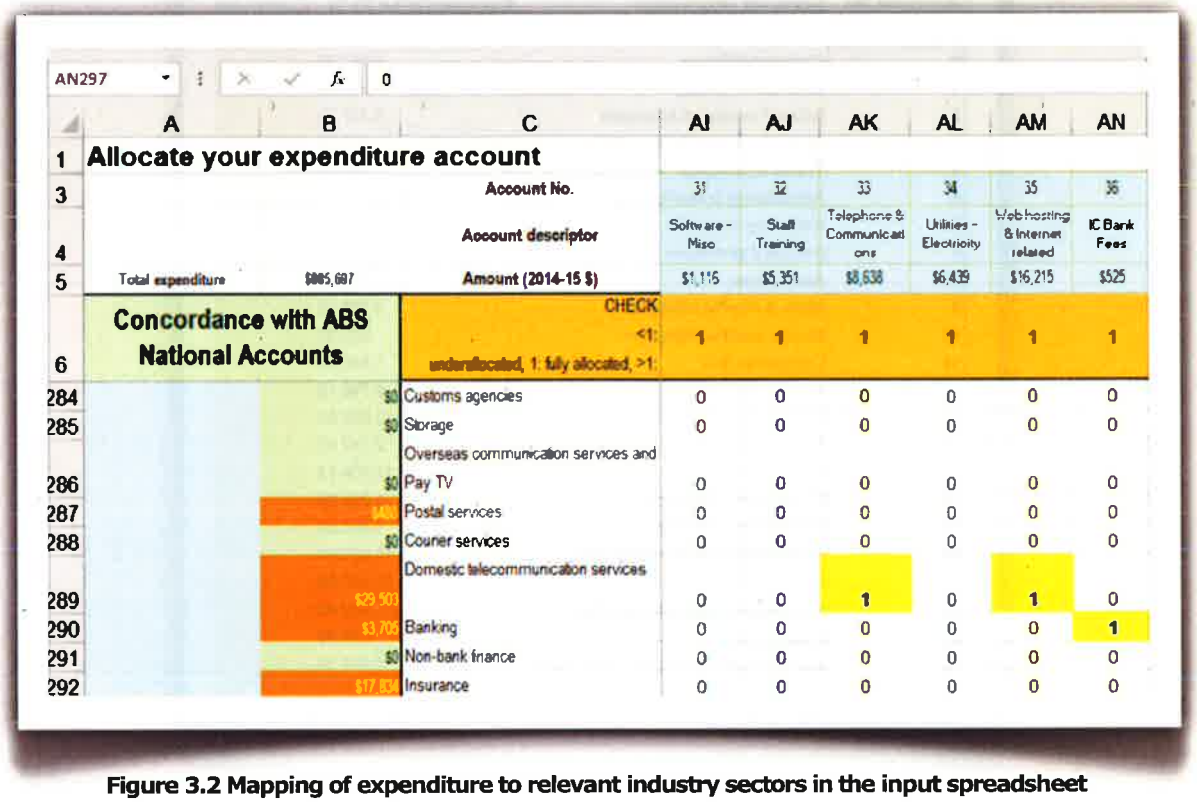
The TBL tool consists of three Excel spreadsheets:

Input data spreadsheet

The expenditure data for the organisation is copied into this spreadsheet as well as other industry sector information and the required indicators that will be calculated (e.g carbon footprint, water footprint, ecological footprint). The input data file is set up by mapping the organisation's expenditure categories to one or more of 345 generic industry sectors that represent the national economy in the IO model. The expenditure mapping process involves the conversion of items from the organisation's own accounts into National Accounts categories. The classifications used in the ISA TBL tool are the product groups from the National Accounts published regularly by the Australian Bureau of Statistics (ABS). These classifications are grouped in the order of primary industry, secondary industry and tertiary industry.

The calculator tool uses this information to calculate the embodied emissions in the $ value of the goods and services purchased by the organisation, thereby providing a full supply chain (i.e scope 3) carbon footprint.

Figure 3.2 shows the mapping of selected expenditure items to relevant industry sectors within the input spreadsheet. In this example, the actual expenditure values are shown in row 5 and the account numbers and descriptions (from an internal accounting system) can be seen in rows 3 and 4. Industry sectors run horizontally down column C, the resulting matrix is then populated by allocating specific expenditure items to particular industry sectors. The yellow cells with a number 1 indicate that 100% of that expenditure item has been allocated to the industry sector on that row. Column B shows the total expenditure allocated to that industry sector.



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	A	B	C	AI	AJ	AK	AL	AM	AN
1	**Allocate your expenditure account**								
3			Account No.	31	32	33	34	35	36
4			Account descriptor	Software - Misc	Staff Training	Telephone & Communications	Utilities - Electricity	Web hosting & Internet related	IC Bank Fees
5	Total expenditure	$885,697	Amount (2014-15 $)	$1,116	$5,351	$8,638	$6,439	$16,215	$525
6	**Concordance with ABS National Accounts**		CHECK <1: underallocated, 1: fully allocated, >1:	1	1	1	1	1	1
284		$0	Customs agencies	0	0	0	0	0	0
285		$0	Storage	0	0	0	0	0	0
286		$0	Overseas communication services and Pay TV	0	0	0	0	0	0
287		$430	Postal services	0	0	0	0	0	0
288		$0	Courier services	0	0	0	0	0	0
289		$29,501	Domestic telecommunication services	0	0	1	0	1	0
290		$3,705	Banking	0	0	0	0	0	1
291		$0	Non-bank finance	0	0	0	0	0	0
292		$17,853	Insurance	0	0	0	0	0	0

Figure 3.2 Mapping of expenditure to relevant industry sectors in the input spreadsheet

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Model data file

The model data file contains the IO tables for the Australian National Accounts published by the ABS. These represent the interactions between all the industry sectors in the economy. The model file also contains a number of other environmental accounts which are linked to the financial IO tables. These environmental accounts cover aspects such as carbon emissions, energy use, water use, land use etc. These accounts are regularly updated by ISA from Australian Government and other research sources. The extended environmental IO tables in the model data file are updated annually by ISA to take into account changes in emissions factors and in the national accounts and to allow for inflation.

The IO tables contain the total emissions for each sector of the economy and the portion commensurate with the organisation's expenditure in each sector is provided in the mapping process described above. This allows the IO calculator to estimate the organisation's share of the average emissions represented by the industry sector.

Calculator spreadsheet (calculation engine)

This is a macro enabled spreadsheet that calculates the carbon footprint or environmental footprint for an organisation from the expenditure data that has been mapped to the industry sectors in the IO tables. The calculation engine uses the IO tables to calculate the embodied emissions for all inputs (materials, energy, water etc) that go into the manufacture or delivery of the goods and services purchased by the organisation. The output from the footprint calculation is a table of the embodied emissions in each of the expenditure categories for the organisation (i.e the embodied emissions in the goods and services purchased by the organisation).

3.2 Outputs

Results from the footprint calculation are presented in the calculator spreadsheet. A number of outputs are provided. The most relevant is the Commodity Breakdown Table (CBT). This is a table of the embodied emissions in each of the expenditure categories for the organisation (i.e the embodied emissions in the goods and services purchased by the organisation). This provides the scope 3 emission categories and allows the calculation of the relevant emissions factors (EF) for all the goods and services purchased by the organisation. The emission factors are expressed as $kgCO_2$-e/$ expenditure. It should be noted that these emissions factors are based on the current version of the IO tables used in the model file and will change over time as the IO tables are updated by the ABS or adjusted annually for inflation and new environmental data as it becomes available.

Table 3.1 shows some of the typical results from an IOA for estimating a scope 3 carbon footprint.

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Table 3.1 IOA Scope 3 Emissions Commodity Breakdown Table

Commodity (expressed in terms of industry sectors)	Impact (tCO_2-e)
Education	69.02
Air transport	22.31
Data processing services	9.39
Food products	7.47
Real estate agent services	6.52
Hotels, clubs, restaurants and cafes	6.37
Community services and religious organisations	4.69
Domestic telecommunication services	4.67
Water transport	4.58
Taxi and hire car	3.35
Accommodation	3.29
Pulp, paper and paperboard	3.20
Accounting services	2.98
Computer and technical services	2.04
Electronic equipment	1.86
Printing and stationery	1.75
Market research and other business management services	1.72
Advertising services	1.66
Cleaning	1.37
Employment placement	1.20
Insurance	0.89
Non-residential building repair and maintenance	0.47
Wholesale trade	0.28
Banking	0.17
Miscellaneous manufacturing	0.11
Legal services	0.11
Books, maps, magazines	0.06
Postal services	0.05

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