



## REVERSE E-WASTE ANNUAL REPORT 2013/2014

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## Foreword

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The need to consider economically and environmentally viable solutions in the face of growing volumes of e-waste in our community is of dire importance in this day and age. In light of this situation in Australia, Reverse E-Waste recognises the need to implement modern, sustainable, scalable and stable strategies to confront this growing issue nationwide.

Reverse E-Waste is a strong contributor to the electronic waste management community, being a service provider that collects, processes, and recycles electronic waste through environmentally sustainable and ethical disposal, helping to relieve an environmentally induced stress on Australia. Our standards include: **ISO9001** (Quality Management Requirements), **AS/NZS4801** (Occupational Health and Safety), **ISO14001** (Environmental Management Systems) & **AS/NZS5377:2013** (Collection, storage, transport and treatment of end-of-life electrical and electronic equipment) this last one being an enabler to work within the Federal Government's Product Stewardship Regulations when this standard is adopted .

Reverse E-Waste was the most recent company to be approved as a Co-Regular Arrangement (ACA) on June 26<sup>th</sup> 2013 and so immediately, at the commencement of a new financial year, faced the daunting prospect of gaining the trust and confidence of Liable Parties, local recyclers and Council waste facilities. Our success in this space can be gauged through the measure of the volume of e-waste that we eventually signed up as our liability and this came to 5012 metric tonnes for 2013/14.

Having already established a firm presence in the Sydney metro region, Reverse E-Waste also has expanded into Brisbane and Melbourne metropolitan areas, and continues to expand nationwide through collaboration with our partner recyclers who are identified in the main as Social Enterprises. Reverse E-waste highly values the very important function and service that Social Enterprises bring to our communities by way of their employment, technical, creative and manufacturing proficiencies. The key to building these partnerships lies within a collective effort that is based on sound, stable and sustainable methods in accomplishing shared goals to achieve a good outcome for all. Our collaborative initiative aims are to inspire environmentally conscious attitudes in all strata of our society from the resident of a local government area to the management team of an enterprise business in relation to considering the fate of electronic waste by the sound processing methods through our valued partners.

Reverse E-Waste implements a number of procedures for decommissioning and data sanitation of specific electronic waste items that appropriately meet our clients' preferences.

Reverse E-Waste has met the majority of its outcomes as outlined in the National Television and Computer Recycling Scheme since joining as an ACA in 2013 and is looking forward to continue delivering its outcomes and improving its performance in addition to

setting out on new environmentally and socially favourable outcomes in the 2014/15 FY and subsequent years to come.

## Company Overview

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### Our History:

Reverse E-Waste was founded in early 2005 with the aim of establishing itself as a management service for the processing of metals and plastics.

In 2009, BHI saw the opportunity to expand its operational focus specifically on the processing of Waste Electronics and Electrical Equipment (WEEE) and introduced the trading name 'Reverse E-Waste' to define this new focus.

In November 2012, Reverse E-Waste commenced a background review into becoming an ACA. In February 2013 Reverse E-waste lodged an application with the Department of Sustainability, Environment, Water, Population and Communities (*DSEWP&C*) for approval as a Federal Government Approved Co-regulatory Arrangement to play its part within the National Television and Computer Recycling.

In June 2013, Reverse E-waste was granted approval as an Approved Co-regulatory Arrangement under the *Product Stewardship (Televisions & Computers) Regulations, 2011*.

### Our Philosophy:

Reverse E-waste was founded on the philosophy of the 'green economy' through recycling and processing operations of e-waste, providing positive .

Essentially, the recycling goals of Reverse E-Waste and those of our members, social enterprises, academic research partners, downstream facilitators, local government authorities and B2B partnerships meet together forming mutually beneficial outcomes for all stakeholders. Reverse E-Waste is an advocate of flexibility in business relationships and believes this is the key to a successful business venture, where operating in this way guarantees an ongoing relationship with our members. Our key focus is on delivering long term outcomes with no "surprises" and delivering these through a model built on sustainable outcomes and long term stable relationships. Our relationships are designed to promote trust between all parties based on a solid foundation of investment of shared intellectual and business assets and acumen delivering to our stakeholders results that are measurable both on and economic and social scale.

 Our Achievements:

Throughout the 2013 - 2014 financial year, Reverse E-Waste has successfully achieved a number of its goals, some of which include:

Goals Achieved	Importance of Goals
<p>Commenced the establishment of the Reverse E-Waste service network for delivering Reasonable Access as required in the Product Stewardship (Televisions and Computers) Regulations, 2011. This network includes:</p> <ul style="list-style-type: none"> <li>• Local Government;</li> <li>• Retail stores (such as Office National);</li> <li>• Australia Post Stores nationwide.</li> </ul> <p>This is still very much a work in progress and is now gaining major traction due to greater participation by many councils across Australia. However, Reverse E-waste did not meet its obligations in the 2013/4 FY for the delivery of Reasonable Access.</p>	<p>Spreads the influence and awareness of our processing &amp; recycling operations to a vast community in the Sydney, Melbourne and Brisbane Metropolitan areas, and consequently strengthened the marketing network for many of our partners involved in our Reasonable Access Scheme.</p>
<p>Successfully satisfied and partially exceeded recycling target for 2013 -2014 FY</p>	<p>Illustrates our effectiveness as a recycler in being more than capable of achieving our set recycling target for this financial year. With this in mind, our clients and partners take certainty and confidence from our services</p>
<p>Successfully satisfied material recovery target for 2013 -2014 FY</p>	<p>Demonstrates our efficiency of material recovery operations performing greatly above the Product Stewardship Scheme target this financial year.</p>
<p>Commenced a strategy of engaging with local government authorities with the intent of establishing long term sustainable e-waste recovery/collection/recycling services &amp; strategies</p>	<p>Ensures that local governments have a real solution for excess scheme e-waste.</p>

## Collection Services and Storage

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### **Collection Services:**

Reverse E-Waste had set out with the mindset of providing the affordability, flexibility and convenience of collection services for the community at large in metropolitan, inner and outer regional, and remote areas of Australia nationwide. In achieving the practicality of this approach, Reverse E-Waste sought to deliver a combination of its participating partner's logistical operations, and its own free of charge for service, to establish a reasonable access network. **See Appendix 1 for the full list of collection services in states and regions for the 2013-2014 Financial Year.**

Reverse E-Waste recognised an existing framework for general recyclable wastes by local government authorities was already in effect and saw e-waste collections in addition to council operations as a strong starting point in establishing its reasonable access network. This allowed for a greater accessibility for the general public and small-medium business within metropolitan areas to drop-off e-waste items, giving rise to favourable outcomes of volume generation and in recycling operations. However, difficulties arose in engaging with local government authorities nationally due to the fact that the majority of these had already in place contracts with existing approved co-regular arrangements (ACA. However, this is now changing as a result of over collection by some ACAs, many local government authorities are now engaging with Reverse E-waste and we a jointly developing a new service model that will deliver sustainable, stable long term collection services to councils.

Reverse E-Waste has also extended its collection services to the retail sector to achieve its reasonable access outcomes. The support of participating Office National stores saw mutual benefits from this partnership that resulted in a growing consumer base and further spread awareness of Reverse E-Waste's collection services. The electronic waste products acceptable for drop-off at Office National stores were computer monitors (CRT and LCD), desktops, laptops, printers, keyboards, mice, and hard disk drives, and photocopiers.

In combination with the support of retail and council networks, Reverse E-Waste also developed a partnership with Australia Post, this being available nationwide. The Australia Post service was a solution for members of the public and small-medium businesses in remote and regional areas who found no readily available service for e-waste disposal. The Australia Post E-parcel online service was set up in aim of encouraging people in their communities to be more responsible for the disposal of e-waste, and making it a more convenient and readily available

service. This service is still being developed and will be delivered through a new WEB portal that Reverse E-waste is in the process of designing and will be relaunched in the 2014/5 FY.

# Recycling

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## **Recycling: Electronic waste items and material categories**

Reverse E-Waste's processing and recycling operations apply to 'end-of-life' materials as defined under the *National Television and Computer Recycling Scheme*. Our operations involve the disassembly of products into the constituent materials that compose the electronic waste items (under the *Product Stewardship (Television and Computer) Regulations, 2011*) which into the following categories:

- Metals
- Plastics
- Lead-glass
- Non-leaded glass
- Printed Circuit Boards

## **Recycling: The procedures**

A number of procedures are in place that will align with environmental compliance and sustainability downstream. Reverse E-Waste has implemented the following procedures for downstream processing:

- Plastic baled and on sold to plastic recycler. Cables, copper & PCBs (Printed Circuit Boards) on sold to an approved downstream recycler for further processing and material recovery.
- Laptops/notebooks/tablets/pdas manually partially dismantled with HDDs and batteries removed sorted, graded and disposed of by an approved downstream recycler for material recovery. Computers are dismantled removing peripherals, motherboard, plastic/metal casing, power supply and then sorting, grading and packaging followed by shipment to approved downstream recycler for final disposition.
- Computer peripherals includes power supplies, UPS, adaptors, cables parts & accessories are, sorted and graded and shipped to an approved downstream recycler.

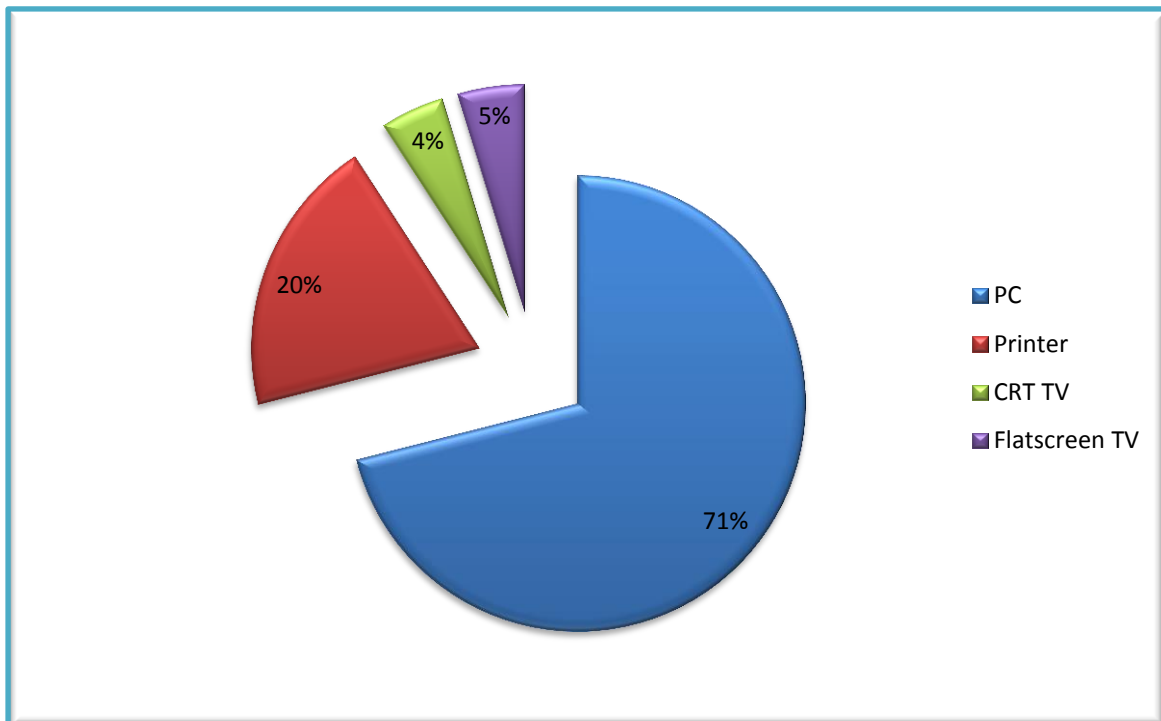


- When requested, data sanitation services have been provided through either degaussing or crushing HDDs.
- We despatch materials (HDD, PCBs, and RAM) to local & international OECD based recyclers in accordance with our contracts and export permits.
- List and contact details of our partner recyclers can be supplied on request.
- Across all these products, Reverse E-waste is achieving a 90% recovery rate.

 **Recycling: Recycling Target**

Reverse E-Waste assures our clients that the handling of products and materials operates within the boundaries of the *Product Stewardship (Television and Computer) Regulations, 2011*, to make sure its target for a particular financial year is met. The 2013-2014 financial year yielded a successful volume surpassing the specified 33% for Reverse E-Waste.

The factors that have contributed to Reverse E-Waste successfully reaching its recycling targets are essentially due to our participating council, retail and postal partners in addition to volume generated from the relationships between its liable parties.



### **Recycling: Materials Recovery Target**

In addition to Reverse E-Waste's recycling target, its material recovery target greatly exceeded the set figure for the 2013-2014 financial year. We achieve resource recovery rates to 90% across many material classes due to the manual nature of our processing and grading. Most products are dismantled using machine tools and categorised materials are manually sorted so that cross contamination is minimised.

Approximately 90% of Reverse E-waste's material was sourced from B2B while 10% was sourced through local government. As Reverse E-waste's services begin to collect more material from councils, the latter number will increase however, Reverse E-waste continues to provide a very competitive service due to the growing volume of B2B sourced material. Further, the amount of materials captured through these two streams reflect the real service that Reverse E-waste is delivering to the community through its model by diverting real materials into a recycling effort.

Reverse E-Waste achieved its material recovery rate principally through its downstream partners, who include industrial smelter complexes and commodity traders.

# Savings

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## **Savings: Energy Consumption & Carbon Emissions (Mined materials vs. Recycled materials)**

Carbon emissions as well as energy production (and consumption) going into acquiring raw virgin materials for electronic waste are at an all-time high in Australia. In order to reduce these environmental impacts in Australia there needs to be a look into recycling management strategies to tackle this issue of electronic waste sustainably in order to further secure the certainty for an enriched environment in the future.

The application of recycling and recovery operations in Australia is proving to be the viable alternative when it comes to the energy savings and reducing emissions. Reverse E-Waste is environmentally conscious of its carbon foot print through its logistics strategies and recycling operations. For example we try to minimise cross country shipments of materials by engaging with logistics service suppliers that have backfill opportunities thus reducing overall costs and our carbon footprint in these instances. As we engage with more carriers, there are greater opportunities to extend these types of operations within outer regional and remote communities by collaborating with councils and aggregating and sharing facilities so that the advantage offered by backfilling is maximised. The 2014/5 FY will see significant growth of our operations in this area and will in turn extend the reach of Reverse E-waste's capacity to deliver genuine, long term and stable reasonable access into remote and regional areas.

## **Work Health Safety Compliance:**

Reverse E-waste enforces strict adherence to WHS procedures in order to minimise WHS incidents during the 2013/14 FY within its own facility and the facilities of its partners due to rigorous monitoring of the operating environments and regular site visits and inspections.

## **Risk Management:**

We have minimised risk to our logistics facility, our processing facility and our office/data centre. Risk mitigation includes separation of service facilities, regular data backups with off-site historical storage. Our facilities include recording surveillance cameras and access can be granted to select customers should they satisfy our strict privacy guidelines.

## Appendix 1: Collection Services Network

Service Name	Service	Meets Reasonable Access?			Product(s)	Location Coordinates		Region	Location Details
		Free?	Not specific?	In br		Latitude	Longitude		Address
Canada Bay Council	Event	Yes	Yes		Both	-33.86259	151.10809	Metropolitan	Cintra Park carpark, Crane Street, Concord
Reverse Garbage Co-Op	Collection Station	Yes	Yes		Both	-33.90267	151.16057	Metropolitan	8/142 Addison Road, Marrickville
Bathurst Council	Milk Run	Yes	Yes		Both	-33.45146	149.5669	Inner Regional	Bathurst WMC, College Road, Bathurst
Orange Council	Milk Run	Yes	Yes		Both	-33.28309	149.10001	Inner Regional	Ophir Road RRC
Bourke Council	Milk Run	Yes	Yes		Both	-30.09008	143.94543	Remote	Cobar Road, Bourke
Wellington Council	Milk Run	Yes	Yes		Both	-32.55588	148.94508	Outer Regional	Wellington WMC, Nanima Village Road, Wellington
Blayney	Milk Run	Yes	Yes		Both	-33.53225	149.25528		4165 Mid Western Highway, Blayney WMC
Cowra	Milk Run	Yes	Yes		Both	-33.83471	148.69121	Outer Regional	Cowra WMC, Glen Logan Road, Cowra
Dubbo	Milk Run	Yes	Yes		Both	-32.24295	148.60484	Inner Regional	Coober Road, Dubbo
RE Thomastown	Collection Station	Yes	Yes		Both	-37.68938	144.99818	Metropolitan	22 Lipton Drive, Thomastown
RE Sydney	Collection Station	Yes	Yes		Both	-33.84786	150.89548	Metropolitan	1024-1028 Canley Vale Road, Wetherill Park
The Bower	Collection Station	Yes	Yes		Both	-33.90267	151.16057	Metropolitan	34/142 Addison Road, Marrickville.
Botany Council	Collection Station	Yes	Yes		Both	-33.95101	151.20333	Metropolitan	Botany Depot, Cnr Pemberton St & Clevedon St, Botany
Burwood Council	Collection Station	Yes	Yes		Both	-33.8953	151.09507	Metropolitan	Kingsbury Street, Croydon
North Sydney Council	Event	Yes	Yes		Both	-33.84786	150.89548	Metropolitan	Contractor collected material and delivered to RE
Port Hedland Office National	Retailer	Yes	Yes		Both	-20.31376	118.57574	Remote	1 The Esplanade, Port Hedland
Surry Hills Office National	Retailer	Yes	Yes		Both	-33.88928	151.17412	Metropolitan	55 Denison Street
City - Office National	Retailer	Yes	Yes		Both	-33.86736	151.21046	Metropolitan	238 Castlereagh Street
Waterloo (AZTEC) Office National	Retailer	Yes	Yes		Both	-33.899	151.20072	Metropolitan	176-178 Cope Street
Noosa - Office National	Retailer	Yes	Yes		Both	-26.41205	153.04376	Metropolitan	2/171 Eumundi Road
Barossa - Office National	Retailer	Yes	Yes		Both	-34.47845	138.9956	Outer Regional	9 Railway Terrace
Pennant Hills - (AXSEL) Office National		Yes	Yes		Both	-33.73761	151.07371	Metropolitan	2 - 340 Pennant Hills Rd
Waitara - (AXSEL) Office National		Yes	Yes		Both	-33.71086	151.10513	Metropolitan	Unit 12 Waitara Ave
Penrith - Office National		Yes	Yes		Both	-33.73812	150.6881	Metropolitan	3/31-33 Jack Williams Dr
Spring Hill (SPENCERS) Office National	Retailer	Yes	Yes		Both	-27.46141	153.0241	Metropolitan	56 Little Edward Street
Mulgrave - Office National	Retailer	Yes	Yes		Both	-37.92367	145.15064		Unit 12/ 12-14 Miles Street

Location Details			State	Date Range Available
Address	City or Town	Suburb		
Cintra Park carpark, Crane Street, Concord	Sydney	Concord	New South Wales	15/02/2014-15/02/2014
8/142 Addison Road, Marrickville	Sydney	Marrickville	New South Wales	01/07/2013-30/06/2014
Bathurst WMC, College Road, Bathurst	Bathurst		New South Wales	23/07/2013-23/07/2013
Ophir Road RRC	Orange		New South Wales	05/09/2013-05/09/2013
Cobar Road, Bourke	Bourke		New South Wales	11/04/2014-18/04/2014
Wellington WMC, Nanima Village Road, Welli Wellington			New South Wales	26/02/2014-04/04/2014
4163 Mid Western Highway, Blayney WMC	Blayney		New South Wales	27/11/2013-17/02/14
Cowra WMC, Glen Logan Road, Cowra	Cowra		New South Wales	12/12/2013-12/12/2013
Cooba Road, Dubbo	Dubbo		New South Wales	28/11/2014- 09/12/2013
22 Lipton Drive, Thomastown	Melbourne	Thomastown	Victoria	01/07/2013-30/06/2014
1024-1028 Canley Vale Road, Wetherill Park	Sydney	Wetherill Park	New South Wales	01/07/2013-30/06/2014
34/142 Addison Road, Marrickville.	Sydney	Marrickville	New South Wales	01/07/2013-30/06/2014
Botany Depot, Cnr Pemberton St & Clevedon	Sydney	Botany	New South Wales	01/07/2013-30/06/2014
Kingsbury Street, Croydon	Sydney	Croydon	New South Wales	01/07/2013-30/06/2014
Contractor collected material and delivered to	North Sydney		New South Wales	24/33/2014-04/04/2014
1 The Esplanade, Port Hedland	Port Hedland		Western Australia	03/06/2014-30/06/2015
53 Denison Street	Sydney	Surry Hills	New South Wales	25/06/2014-30/06/2015
23B Castlereagh Street	Sydney	Sydney	New South Wales	04/06/2014-30/06/2015
176-178 Cope Street	Sydney	Waterloo	New South Wales	04/06/2014-30/06/2015
2/171 Eumundi Road	Noosa		Queensland	26/06/2014-30/06/2015
9 Railway Terrace	Nuriootpa		South Australia	25/06/2014-30/06/2015
2 - 340 Pennant Hills Rd	Sydney	Pennant Hills	New South Wales	25/06/2014-30/06/2015
Unit 12 Waitara Ave	Sydney	Waitara	New South Wales	25/06/2014-30/06/2015
3/31-33 Jack Williams Dr	Sydney	Penrith	New South Wales	25/06/2014-30/06/2015
56 Little Edward Street	Brisbane	Springhill	Queensland	25/06/2014-30/06/2015
Unit 12/ 12-14 Miles Street	Melbourne	Mulgrave	Victoria	25/06/2014-30/06/2015