

**Environmental Sustainability Report**

**July 2014 - June 2015**

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| **Our Environmental Commitment** |
| At **cesar** we believe healthy ecosystems are fundamental to our future. A thriving and sustainable world can be achieved when environmental concerns are properly balanced with the needs of business and the community.  Caring for the environment is what we do. We lead by example and take responsibility for the impact we have.  We will:   * Apply best practice environmental management options to our business * Work to improve the environmental awareness of our staff, clients, suppliers and local community * Improve efficiency of our business to minimise water and raw material use, energy consumption, waste and pollution * Conduct regular assessments of the environmental impacts of our operations to identify potential areas for improvement. We will then implement those improvements * Follow up to ensure the longevity, consistency and usefulness of environmental initiatives * Continue to hold environmental sustainability as a core company value   Using these guiding principles, we will strive to continuously improve our environmental management. |

This report outlines how **cesar** is managing its impact on the environment including:

* our environmental commitment
* carbon footprint analysis, 2014/15
* actions underway to help reduce environmental impact, 2015/16

***References:***

*The Carbon Footprint of Victoria’s Small and Medium Enterprises*, *A Carbon Down Research Report*, Carbon Down (climate change partnership between VECCI and the Victorian Government), April 2011.

*This report written: 15th January 2016*

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*Reviewed by:*

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| **Measuring and Monitoring** |
| Measuring and monitoring **cesar**'s carbon emissions is a critical part of our environmental management work. It allows usto quantify our impact, identify priority areas to improve and track performance overtime. |
| ***Carbon Dioxide Emissions*** |
| **cesar**’s carbon (CO2) emissions for the 2014/15 financial year were 43.7 tonnes\* (Figure 1). This is a decrease of 22% from our last assessment in 2012/13 (55.6 tonnes).  This decrease in emissions is due to:   * Reduction in flight emissions by 60%. * Decrease in company car emissions by 30%. * Reduction in waste carbon emissions by 82%     *Figure 1: Percentage breakdown of* ***cesar****’s annual emissions 2014/15.*  Emissions per staff member have decreased since 2012/13 (Figure 2). This average continues to be higher than 2010/11, largely due to the increased electricity demand at the new **cesar** office in Parkville (Figure 3). A reduction in staff numbers (8.0 in 2012/13 to 6.5 in 2014/15) also results in a higher proportionate share per staff member for the office’s electricity demand.      *Figure 2: Relative CO2 emissions per* ***cesar*** *staff member across 2010/11, 2012/13 and 2014/15.*    *Figure 3. The changes in carbon emissions (tonnes) for each major emissions source.*    **Since 2012/13 changes in carbon emissions by source are:**   * **Company car usage -30%** * **Flights -60%** * **Staff commuting +44%** * **Electricity +5%** * **Waste -82%**   ***Decrease in car usage (company cars)***  Car use was nearly half of **cesar**’s carbon footprint in 2010/11 at 21.1 tonnes (Total Emissions: 43.0 tonnes)  This was reduced to:   * 15 tonnes in 2012/13 (Total Emissions: 55.6 Tonnes) * 11 tonnes in 2014/15 (Total Emissions 43.7 tonnes)   Company car usage decreased from 49% of total emissions to 25% in the time since the first carbon footprint analysis (2010/11).  Policies implemented to reduce car CO2 include:   * Skype and conference calling facilities * Upgrade of two company vehicles in April 2014 to lower emitting * Business bicycle for short distance travel * Trip minimisation through overnight stays or combining project site visits   A roll back in the number of field trials within the Sustainable Agriculture division and platypus surveys in the Biodiversity Conservation division have also assisted in this emissions reduction.  ***Decrease in flights***  Carbon emissions for business flights were reduced in 2014/15 (7.4 tonnes) relative to 2012/13 (18.4 tonnes).  This is due to:   * Reduction in long haul flights to Christmas Island (14.7 tonnes in 2012/13) * Use of video conference facilities wherever face to face meetings were not critical   The number of short/medium length flights (such as Melbourne to Sydney/Brisbane/Perth) has increased in 2014/15 but these have been minimised where possible. Carbon offsets were purchased for 50% of these flights (not considered in the figures above).  ***Increase in staff commuting emissions***  There was a 44% increase in carbon emissions associated with staff commuting since 2012/13 (Figure 4). This is associated with staff living further away from the office. Each staff member is now commuting an average of 57km/day whilst in 2012/13 they only travelled 36km/day.  As a result of the increased commute distance and changes to public transport options, staff have increased their use of trains in their commute(Figure 5),)  *Figure 4: Staff commuting* carbon *emissions profile – based on staff commuting surveys.* Note: Total kilometres travelled (to the nearest thousand) was 85,000 (2014/15), 62,000 (2012/13) and 85,000 (2010/11).    *Figure 5: Staff commuting by type (proportional) for 2010/11, 2012/13 and 2014/15. Calculations were determined based on a staff commuting survey completed on office staff members.*  ***Increase in electricity***  Electricity related carbon emissions rose by 5% relative to 2012/13.  As a tenant at 293 Royal Parade, Parkville, **cesar** does not have a separate electricity meter to the rest of the building. Its usage is based on the percentage of its office’s floor area of the total building area.  **cesar** has introduced practices to reduce its own electricity usage such as:   * Turning off appliances/monitors/lights when not in use * Relying on natural light where possible   Some factors outside **cesar**’s control impact electricity usage.  A lift was installed at the office’s building since the 2010/13 carbon footprint report, which may account for the rise in electricity usage.  **cesar** will engage with the landlord and other tenants to help reduce the overall emissions of the entire building.  ***Decrease in waste***  **cesar**’s annual waste production (landfill and recycling) was:   * 229.8 kg in 2011/12 * 79.8 kg in 2012/13 * 22.6 kg in 2014/15   Waste produced at **cesar** has decreased by 90% since the original 2010/11 waste audit.  Since **cesar**’s initial sustainability report methods introduced to reduce waste include:   * Office compost bin * ‘Presso’ coffee maker (no pods, no electricity) * Recycling education and signage * Staff education on waste * “Paper free” office culture (where possible) * Rechargeable batteries for devices * Participation in “Enviro Week”     *Figure 6:* ***cesar****’s* waste profile by mass (kg) since 2010/11. Total waste has reduced from 229.8 kg to 22.6 kg annually. Waste is determined by an annual waste audit and extrapolated to **cesar**’s operational weeks per year (50.5)  Whilst waste is the smallest component of **cesar**’s carbon footprint it is an opportunity to engage staff and make immediate changes to reduce **cesar**’s environmental impact.  A small number of items that could have been recycled/ composted were found in regular rubbish. These included teabags, paper towel and cupcake patties. These items were highlighted at a staff meeting as a reminder to reduce waste wherever possible.  The current method for calculating waste emissions is to conduct a one-week audit of office waste and extrapolate to a year (the office is open 50.5 weeks per year).  **cesar** is carefully reviewing the work it does in the laboratories at the Bio21 facility, TerraRack! Micropipette tip racks (Figure 7) have been introduced. These racks are made from recycled materials and consist of less plastic compared to conventional tip racks. Whilst the lab is currently not accounted for in **cesar**’s carbon emissions this highlights the efforts of staff to lower the impact of our work wherever possible.      *Figure 7: Rainin Terra-Rack! Micropipette tip rack (left). Comparison to standard micropipette casing (right)*  *\* Not included in this 2014-15 carbon footprint analysis: laboratory waste & electricity; chemical/field related waste; remote work e.g. staff member working from home; embodied carbon in products* ***cesar*** *purchases; carbon offsets purchased* |
| **Action Items** |
| Based on the 2014/15 Carbon Footprint there are a number of challenges to address including:   * Apparent increase in electricity usage * Increase in staff commuting related emissions * Increase in short and medium length flights * Ensuring all waste that could be composted or recycled is disposed of correctly * The Sustainability Team will consider these key issues and make commitments and actions in the 2015/16 year. Already we have begun the process of leading a “Green Team” committee with building managers and other tenants to identify opportunities to reduce energy usage on site   **2015/16 Year**  The 2015/16 year is underway and will not be formally reported on in this document.  However some highlights from the year have included:   * Participation in Enviro-Week to encourage sustainability in the workplace and at home * Qiagen Process Review to reduce waste and improve efficiency in lab processes * Implementation of TerraRack! in the Bio21 lab space. This product reduces the plastic in micropipette tip racks and is made from recycled materials (Figure 7) |
| **Carbon Offsets** |
| In 2014/15 a total of 3.7 tonnes of carbon offsets were purchased through aeroplane flight providers. This would reduce **cesar’s** carbon footprint to 40 tonnes of CO2. This equates to an offset of 50% of total flight CO2 emissions, a slight increase relative to the 48% purchased in 2012/13 (the first assessed period where this option was purchased). |
| **History of cesar’s CO2 Emissions and our Commitment to the Future** |
| In the 2010/11 financial year **cesar** began investigating its carbon footprint to establish a benchmark for ongoing monitoring and improvement. Reviews have now been undertaken in 2012/13 and 2014/15.  **cesar**’s annual carbon emissions were:   * 43.0 tonnes in 2010/11 * 55.6 tonnes in 2012/13 * 43.7 tonnes in 2014/15     Victorian businesses with 0-19 employees had an average emissions rate per person of approximately 16.3 tonnes (Carbon Down, 2011). **cesar**’s 6.7 tonnes per person in 2014/15 tells a positive story.  **cesar** may have a relatively small environmental impact but our commitment does not stop there.  **cesar** strives to lead by example. We interact with clients, suppliers and the community to further reduce both our own, and others, impact on the environment. We see it as our responsibility to share this passion and embed our core sustainability principles into all of our work. Just as the names of the two divisions of **cesar** imply, we are advocates for biodiversity and sustainability. |

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| **Actions** | Reducing demand on earth’s resources | Reducing **cesar**’s emissions | Offsetting emissions | Staff engagement |
| Below is a list of initiatives and processes that staff members are currently undertaking to help **cesar** manage its impact. |
| **Leadership** |  |  |  |  |
| Sustainability team - internal group of people who lead our environmental sustainability, devise strategies and implement actions |  |  |  | ✔ |
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| **Transport** |  |  |  |  |
| Skype and conference calling facilities to reduce travel for meetings |  | ✔ |  |  |
| Supporting working from home arrangements |  | ✔ |  |  |
| Encourage public transport commuting e.g. staff functions |  | ✔ |  | ✔ |
| Business bike for staff errands and commuting between locations |  | ✔ |  | ✔ |
| Reduce work km where possible e.g. staying overnight, planning ahead |  | ✔ |  |  |
| Offset business flights through airline programs |  |  | ✔ |  |
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| **Office supplies** |  |  |  |  |
| Shared stationery in office | ✔ |  |  | ✔ |
| Encouraging a paper free office culture | ✔ |  |  | ✔ |
| *Providing large screens for easy document reading* |  |  |  |  |
| *Double sided printing & scrap paper supply* |  |  |  |  |
| *Client reports provided electronically* |  |  |  |  |
| Generic group wide business cards | ✔ |  |  |  |
| Reusing old branded stationery | ✔ |  |  |  |
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| **Purchasing** |  |  |  |  |
| Stationery orders made in bulk and with recycled products where possible | ✔ |  |  |  |
| Recycled or bamboo paper reams | ✔ |  |  |  |
| Printing supplier – veg based inks and recycled stock | ✔ |  |  |  |
| Compostable plastic for laboratory supplies where possible |  | ✔ |  |  |
| Mindfulness of supplier’s green credentials | ✔ |  |  |  |
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| **Energy** |  |  |  |  |
| All electronics (where possible) switched off every night & weekends |  | ✔ |  | ✔ |
| All lights switched off at night & weekends |  | ✔ |  | ✔ |
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| **Waste** |  |  |  |  |
| 6 month waste strategy implemented Feb 2012 | ✔ | ✔ |  | ✔ |
| Office compost initiated April 2012 |  | ✔ |  | ✔ |
| Replaced coffee machine – no longer use “pods” in April 2012. | ✔ | ✔ |  | ✔ |
| E-waste collection in 2013 | ✔ | ✔ |  | ✔ |
| Enviro week initiative – personal staff sustainability commitment | ✔ | ✔ |  | ✔ |
| Recycling paper, cardboard, bottles etc. and improve bin signage |  | ✔ |  | ✔ |
| Communal reusable takeaway cups | ✔ | ✔ |  | ✔ |
| Rechargeable batteries used for field & office equipment | ✔ | ✔ |  | ✔ |
| Reuse and maintain field and laboratory supplies e.g. pitfalls, vials | ✔ |  |  |  |
| TerraRack! micropipette tip racks used at Bio21 implemented 2015 | ✔ |  |  | ✔ |
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| **Office environment** |  |  |  |  |
| Plants to help naturally clean air |  | ✔ |  | ✔ |
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