

BEACONSFIELD  
DENTAL  
ENVIRONMENTAL  
POLICY

- Winner 2018 Premier's Sustainability Award in the Health Category.

- Winner 2015, 2016 and 2017 Casey Cardinia Business Awards for Sustainability and the Environment.

- Finalist 2018 and 2019 Melbourne Awards in the Contribution to Environmental Sustainability by a Corporation.

- Finalist 2016 Premier's Sustainability Awards Small to Medium Business Category.



# Winner Premier's **Sustainability** Awards 2018

**Winner**  
Environmental Sustainability 2016  
Beaconsfield Dental  
Celebrating business excellence across  
the Casey Cardinia Region

[www.caseycardinia.com.au/businessawards](http://www.caseycardinia.com.au/businessawards)

Casey Cardinia Business Awards  
City of Casey  
Cardinia

**Winner**  
Environmental & Sustainability Award 2015  
Beaconsfield Dental  
Celebrating business excellence across  
the Casey Cardinia Region

[www.caseycardinia.com.au/businessawards](http://www.caseycardinia.com.au/businessawards)

Casey Cardinia Business Awards  
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**Winner**  
Environmental Sustainability Award 2017  
Beaconsfield Dental  
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Beaconsfield Dental is committed to sustainability and preservation of the environment. Our ultimate aim is to become energy and water self-sufficient. This also reduces costs on electrical and water bills.

As a result, a number of measures have been undertaken to achieve this aim. These are:

- Solar panels and solar hot water. Beaconsfield Dental was originally fitted with a west-facing 15 kW (60 solar panel) PV array. As of 22/11/17, another east-facing solar panel PV array was added. This is a 17.7 kW system consisting of 66 solar panels making a total 126 solar panels. The new array will take advantage of the morning sun, while the existing array harvests the afternoon sun. A further 18 solar panels are being added to the western roof as of July 2021. As of May, 2021, Beaconsfield Dental has generated 192 megawatts (192,000 kilowatts) of electricity in just over 7 years. This equates to a saving of 251,520 kg of CO<sub>2</sub> (251 tonnes) or over 5,004,200 Black Balloons of CO<sub>2</sub>, assuming the electricity comes from Victorian brown coal.
- Water tanks, with a 17,000 litre capacity, for toilet flush and timed garden irrigation. It is estimated that Beaconsfield Dental saves in excess of 60,000 litres of water each year.
- Indigenous and native plants including Victoria's floral emblem, the Common (Pink) Heath and Australia's floral emblem, the Golden Wattle.
- Full building insulation with rating 4 polyester batts in the walls and ceiling. Floor insulation consists of heavy duty foil/foam insulation. Windows are double glazed and the frames are fully sealed.
- LED lighting.
- Selection of energy and water efficient appliances.
- Composting. Twelve compost bins are available.
- Recycling and waste management.
- Patient and staff education about helping the environment.
- Selection of biodegradable, environmentally friendly products.

- Waste mitigation for all consumables.
- Electric car charger. A Tesla car charger is fitted near the garage.
- Social media, website and internet promotion.
- Booklets in the patient lounge and treatment rooms highlighting sustainability.

## Staff Directives

The following procedures are to be performed by staff in an effort to preserve the environment.

### 1. Reduction of electricity consumption.

A. Turn off all appliances and lights that are not in use or are unnecessary. This applies especially to idle treatment rooms and during lunch breaks. Remember to turn off external lights. If necessary, turn off the heating and cooling.

B. Adjust settings on computers to enter sleep mode after short periods of inactivity.

C. Selecting energy efficient appliances.

D. Do not start autoclaves, thermal disinfectors or ultrasonic baths unless full of instruments. These devices are high energy consumers and must be used judiciously. The thermal disinfectors are rated at approximately 6.7 kWh and the sterilizers 1 kWh and together contribute to a significant amount of Beaconsfield Dental's electrical usage.

E. Check energy bills and electricity consumption regularly to monitor use.

F. Ensure appliances such as the coffee machine are on sleep mode. Place air conditioners on timers and turn off before public holidays. When autoclaves are on timers, ensure they run at off-peak times when the sun is out.

G. Ensure the external timed lights are adjusted regularly so that they do not run during daylight hours, as the length of days change. Limit the time they are on at night.

H. Analysis of Beaconsfield Dental's electricity consumption by South East Solar revealed inefficient use of heating/cooling systems. This allowed fine tuning of the timers to further reduce electricity consumption. The climate control systems must be constantly monitored to ensure use is kept to a minimum.

I. Ensure the blinds on the west of the building are down during the Summer months and retracted in the cooler months. This blocks sunlight entering the building during Summer reducing the need for cooling but allowing sunlight in during the cooler months.

## 2. Reduction of water consumption.

A. Ensure taps are maintained to avoid dripping. Turn off taps fully and when not in use.

B. Use half flush buttons on toilets where possible.

C. Set the garden drip irrigation system to operate less days, shorter periods and in the early hours or night to avoid evaporation. Ensure rain delay is operational and stop watering during cooler and wetter months. Turn off if heavy rain is expected.

D. Ensure thermal disinfectors, autoclaves and the dishwasher are full before use, to reduce water consumption.

E. Check water bills regularly to closely monitor consumption.

## 3. Waste Mitigation

A. Staff must be educated in dispensing the least amount of materials necessary.

B. Due to infection control measures, a large amount of waste is generated. Even still, staff must attempt to reduce wastage through avoiding carelessness.

## 4. Recycling.

A. All products that can be recycled must be recycled. There are recycle bins in the kitchen, reception and garage. All staff must be familiar with what can be recycled. Check if the plastic item has a recycle symbol on the bottom. Recyclable food receptacles should be rinsed or filled with water then placed in the designated bin. Avoid over-use of water while doing this. If the recyclable item is considered contaminated, then it should be handled with gloves to discard safely. If the item is contaminated, then it is acceptable that it can be placed in the garbage for safety reasons.

B. Shredded paper can be composted in the 10 compost bins. Alternatively, it can be bagged and taken to local pet shops for use as bedding. Credit cards and plastic are not to be shredded as they will not compost.

C. Batteries are not to be discarded in bins. They are to be collected in a designated receptacle located in Sterilization Room 1 and taken to recycling depots. The used battery receptacle is in the drawer in sterilization room 1 where the new batteries are kept.

D. Used printer cartridges can be returned to either printer shops for refilling or collection points such as Officeworks. The same applies to used computers and electrical devices. There is a receptacle in the garage for used cartridges, polystyrene, cabling or electronic devices. The local refuse transfer area collects these items.

E. For computer and TV recycling, the National Television and Computer Recycling Scheme provides Australian householders and small business with access to free recycling services for televisions, computers, printers and computer products (such as keyboards, mice and hard drives). Details can be found at: <http://www.sustainability.vic.gov.au/services-and-advice/households/waste-and-recycling/televisions-and-computers>

F. Toxic liquids can be taken to council "Detox your home" programs. Collection points can be found on the Sustainability Victoria website.

G. Amalgam waste is collected in purpose-cartridges canisters. Once full, remove these following the manufacturer's instructions and call an amalgam collection agency to remove for recycling. Take care while handling amalgam capsules and clean up any spillage immediately. Each treatment room has a container for waste amalgam and capsules. Once full, they are to be collected by a reputable collection agency.

H. Polystyrene can be collected and taken to the local Waste Transfer Station for recycling.

I. Planet Ark also provides information on recycling operations – see the Recycling Near You website at [www.recyclingnearyou.com.au](http://www.recyclingnearyou.com.au) or call [1300 733 712](tel:1300733712).

## 5. Organic matter.

A. All plant and vegetable matter, including coffee slugs must be placed in the black receptacle under the sink. These can then be placed in the ten compost bins situated at the rear of the building along with shredded paper. Ensure mixing and varying of items placed in the compost bins. Avoid placing foodstuffs that attract vermin. The compost bins can be topped up occasionally with worms purchased at local nursery suppliers.

B. Compost can be placed onto the garden as mulch at a later date.

C. One of the 12 compost bins has two separate compartments-one for unsoiled latex gloves and the other for clean autoclave pouch backing paper. Currently we are trialling composting them to see if, and how long they take to compost. There is a dedicated rotating compost bin with separate compartments; gloves in the left side and paper in the right. This began in November 2019. After 6 months, the paper backing is composting well but the latex gloves show little progress. The trial is still in progress.

## 6. Garden.

A. Beaconsfield Dental has an indigenous plant policy. They are drought tolerant and attract indigenous fauna. Native plants are acceptable in certain instances. There are photos of some of the plants, decorating the toilets, to bring attention to the importance of indigenous flora. There is also a wall picture in the north corridor displaying Victoria's floral and faunal emblems - Common (Pink) Heath, Leadbeater's Possum, Weedy Seadragon and the Helmeted Honeyeater.

B. The garden should be checked regularly for replacing or adding plants as necessary.

C. It should be mulched regularly. This can be sourced from the 12 compost bins.

D. The drip sprinkler system should be checked for leaks. The sprinkler system should be programmed to operate at night for once or twice a week, and 5 minutes per section.

E. A list of indigenous plants can be found in the City of Casey "Indigenous Plant Guide" which is kept on the premises.

F. Pick up any rubbish that is found in the car park, garden beds and in the near vicinity of the clinic and dispose of it according to whether it is recyclable or not.

G. Beaconsfield Dental has added garden beds at the rear. Some of these are native and indigenous edibles. This not only promotes sustainability, but also encourages healthy eating. Two

of the vegetable garden beds include edible indigenous and native plants sourced from Peppermint Ridge Farm. Some of the larger native and indigenous edible plants are planted in the car park garden beds. The clinic possesses a book outlining their cultivation and uses and are sourced from Peppermint Ridge Farm in Tynong North.

H. The garden had recently been planted with the Golden Wattle-Australia's floral emblem.

#### 7. Staff and patient education.

A. Staff should be trained in these measures and educated on preservation of the environment.

B. Patients should be regularly shown the wireless solar device which displays electricity generation, CO<sub>2</sub> saved and money saved. Showing these benefits may motivate them to do the same. Data can be shown on the solar panel portal to give daily, weekly, monthly, annual and total energy generation.

#### 8. Biodegradable Products.

A. Wherever possible, biodegradable and environmentally friendly products are to be sourced. This includes patient cups, suction tips, cleaning products and other items.

#### 9. Paper.

A. Avoid printing hard copies unless absolutely necessary. Use double sided printing where possible.

B. Where possible, use electronic copies of documents such as infection control and material data safety sheets. These are stored on the PC shared server.

C. Share documents using usb devices rather than printing them.

D. If hard copies of documents are necessary, then limit the number of copies.

E. Recycle used paper. Purchase recycled printing paper that is from sustainable forestry sources.

F. Reports, referrals, X rays and other documents are emailed where feasible to further reduce paper consumption.

G. Shredded paper can be sent to local pet shops or composted. For privacy and security reasons, paper must be shredded on occasion to ensure patient confidentiality. Plastic and credit cards are not to be shredded as they will not decompose in the compost bins.

#### 9. Electric Car Charger

As of early 2017, Beaconsfield Dental has installed a Tesla electric car charger for the convenience of our patients. It is located on the southern aspect of the building, right of the garage. The opener to the cabinet is located in the garage, as is the isolation switch. One of our dentists has a Tesla car and uses it regularly.

## 10. Internet

Beaconsfield Dental actively promotes sustainability and the environment on both social media and our website. Our website has information on some of the measures Beaconsfield Dental adopts to aid Sustainability and the Environment. This document can be found on the website, as well as on Beaconsfield Dental's Shared PC Server folder. Significant events and general environmental and sustainability posts, such as installing the Tesla charger, are announced on Facebook, Google Plus, Twitter, LinkedIn, Pinterest and Instagram. Beaconsfield Dental also follows important websites such as Sustainability Victoria and Planet Ark on social media. Staff and dentists have been informed that internet searches use more energy than what people think, as they access much larger servers.

## 11. Dental Materials and Consumables.

Dental materials and consumable items e.g. tissues should be monitored for excessive use. This can be achieved by comparison of costs and amounts when purchased, from previous purchases. Staff are instructed to be frugal with items and not dispense excessive amounts. Due to infection control reasons, once a material is dispensed, it must be discarded, hence wasting it.

## 12. The Future

Beaconsfield Dental continues to strive to improve its environmental sustainability. There is a plan to increase the number of solar panels and water tanks. There is provision for both. There is ample space around and under the building to house batteries for back up electrical power when this becomes feasible. There is a yearly budgetary allocation for additional environmental sustainability measures. Beaconsfield Dental one day aims to be energy self-sufficient and go off grid.

Late 2018 saw the addition of raised garden beds to grow vegetables at Beaconsfield Dental. These beds are watered by a drip feed system directly from the water tanks. This water is unfiltered to provide nutrients for the plants. As the water comes directly from the tanks, it means it bypasses the water meter, but water savings can be measured by the fitting of in-line water meters. Some of the garden beds, as well as the main garden, have been planted with edible indigenous and native plants. These garden beds promote both sustainability and healthy eating. Included in these are the lemon scented myrtle, anise myrtle, Davidson's plum, Warrigal greens and native basil to name a few.

There are paintings of Victoria's floral and faunal emblems on the water tanks: Leadbeater's Possum, the Helmeted Honeyeater, the Weedy Seadragon and the Pink Heath. Active promotion of these emblems is vital to their preservation. In late 2018, another water tank was painted with the critically endangered Baw Baw frog. The Baw Baw frog, Helmeted Honeyeater and Leadbeater's Possum are only found in Victoria and are all critically endangered. These paintings are to educate our patients and staff about their plight and help preserve them. Dr Robert Panjkov is a member of the Wombat Protection Society, Friends of the Leadbeater's Possum and Friends of the Helmeted Honeyeaters. Beaconsfield Dental urges people to join these societies to help them continue their valuable work.

One recent art acquisition is the painting 'Exhibit with Reluctant Observers.' This piece of magnificent artwork was given to Beaconsfield Dental by renowned artist John Krzywokulski. It is a painting depicting Uluru which is now on a pedestal as a museum piece looking upon what is left of



the environment, in despair. In John's words Uluru, which has endured, is looking on thinking "What the hell has happened?"

At the moment, Beaconsfield Dental is ramping up its efforts to reduce waste and recycle more. Recycling bins have been added to the treatment rooms to collect unsoiled paper cups for recycling. Clean plastic autoclave pouch backing is being collected to take to plastic drop-off points for recycling.

Another exciting venture is Plogging. This is the combination of exercise and collecting rubbish from nearby areas, especially Acoonah Park. This not only removes rubbish for a cleaner environment but helps with staff morale and their health. For example, one recent plogging event saw 5 staff members pick up 2 bags of rubbish on the Acoonah Park nature strip in half an hour. Beaconsfield Dental will be speaking to Australian dental manufacturers in early 2020 to discuss the implementation of sustainability measures to their businesses.

# BEACONSFIELD DENTAL'S PAINTED WATER TANKS

**HELMETED  
HONEYEATER  
VICTORIA'S BIRD  
EMBLEM  
CRITICALLY  
ENDANGERED**



**LEADBEATER'S  
POSSUM  
VICTORIA'S ANIMAL  
EMBLEM  
CRITICALLY  
ENGANGERED**



WEEDY SEA  
DRAGON  
VICTORIA'S MARINE  
EMBLEM



**PINK HEATH  
VICTORIA'S FLORAL  
EMBLEM**



**BAW BAW FROG  
FOUND ONLY IN  
VICTORIA  
CRITICALLY  
ENDANGERED**





