



Live lighter & brighter at

B BRABHAM



DevelopmentWA

PEET

Live lighter at Brabham

Bringing back the best of the good old days doesn't mean losing the best of today. We've applied modern thinking towards innovative community product incentives and have achieved a 6 star 'Green Star', by the Green Building Council of Australia, which is an internationally-recognised sustainability rating system. This benchmark represents a World Leading Sustainable Development, an outcome the Green Building Council of Australia publicly acknowledges for only 5** other communities in Western Australia, and the first in the City of Swan.

Sustainable landscaping options and energy efficient initiatives for each household are just some of the ways we are working towards reducing our footprint and your household bills. On completion of the Project, Brabham's carbon footprint is anticipated to be up to 40%* lower than a typical land estate and will be a place that is wise beyond its years.

Live lighter knowing you're contributing to change.

*Assumes solar PV is installed on all eligible lots (average of 2-3KW/dwelling).

**Correct as at 19/12/2024.

green building council australia

6 greenstar

Communities v1.1

CONTENTS

1. THE FUTURE IS BRIGHTER	4
2. WHAT WE'RE DOING AT BRABHAM	5
3. BRABHAM BETTER LIFE BONUS	6
4. WHAT YOU CAN DO INSIDE YOUR HOME AT BRABHAM	7
4.1 Your Home Design	8
4.2 Your Energy	12
4.3 Your Kitchen	13
4.4 Your Living Area	15
4.5 Your Bedroom	16
4.6 Bringing The Outside Inside	17
4.7 Your Garden	18
5. REFERENCES	19

1. The future is brighter

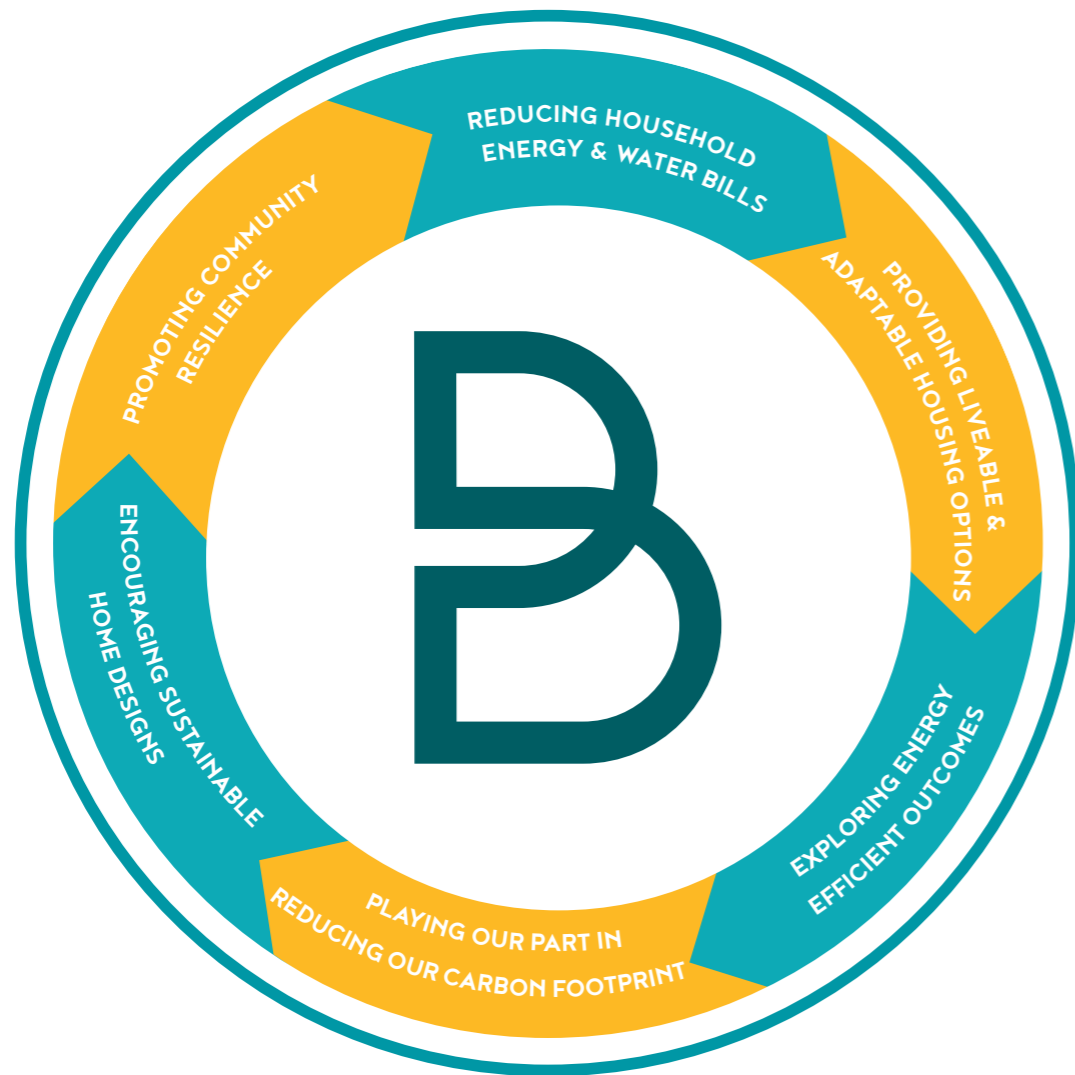
Whether you embrace sustainability to save money, future-proof your home, or contribute to a greener future, we all know that the future is brighter.

Australian households use around 10.5% of Australia's total energy¹ (Australian Energy Update, 2020), but energy productivity is improving thanks to more efficient lighting, heating, cooling, and appliances. By incorporating passive design, adopting energy-efficient technologies, and

switching to renewable energy like rooftop solar, households can reduce energy use and lower emissions.

By future proofing your home, you're not only doing your part in creating a greener planet but you'll also be saving money on your household bills.

At Brabham, we aim to foster *sustainability* and *change* through:



2. What we're doing at Brabham

Brabham is creating a sustainable and connected community which will be home to approximately 3,300 new dwellings as well as schools and recreational areas. Residents will be welcomed to a vibrant and thriving estate that seeks to retain the cultural and natural heritage of the 220ha site.

The project will be striving to achieve the following initiatives in order to foster sustainability and change for future generations.



Creating a green environment by investing in alternative water solutions that enables us to grow a more sustainable environment



Facilitating neighbourhood connections through investment in community events as well as supporting local groups and clubs



Reducing waste by reusing and recycling materials as part of our processes in addition to increasing access to recycling in public places



Planting up to double the number of trees required by the City of Swan to streetscapes within the estate



Retention of existing bushland that borders the site as well as the beautification of St Leonards Creek



Investigating a community battery network and exploring eco-friendly technology that will help to reduce residents' reliance on the grid and reduce their emissions



Designing for healthy and active lifestyles through thoughtful streetscapes and infrastructure linking residents to parks throughout the estate and to each other

3. Brabham Better Life Bonus

Brabham makes sustainable living affordable and easy with solar, energy and garden initiatives. Each dwelling will be provided with the Brabham Better Life Bonus package.

Our Better Life Bonus package is intended to help you save money by reducing your household energy bills by up to 50%*, and to help you reduce your carbon footprint. We're also offering an enhancement to the existing front landscaping package, which will assist you in improving water efficiency and achieving a 57% average reduction in garden water usage annually**.

As part of the Better Life Bonus Package, you'll receive:



Solar PV

Up to \$3,000 toward a solar system (minimum 1.5kW) - dependent on lot size.



Mountain Bike

Every home in Brabham will be offered a free adult bike or two kids bikes when they move in to help reduce greenhouse gas emissions and improve your health.



Home Energy Management System (HEMS)

A home energy management system to help you track your energy usage.



Smart Controller

Upgrade to a wifi enabled smart irrigation controller which automatically adjusts your water usage based on data from local weather stations, for improved water savings.



Heat Pump

\$1,000 upgrade to a heat pump hot water system which is more energy efficient than the standard hot water system¹.



wifi Enabled Meter

Installation of a wifi enabled water meter to help you understand your water usage in the garden and to detect leaks before they become an issue.



Design Guidelines Consultation

This service is available to all purchasers to provide guidance on design and sustainable elements for your home.



Fencing & Landscaping Voucher

Soil moisture retention upgrade as part of your front landscaping package to help you achieve a healthier, water efficient garden.



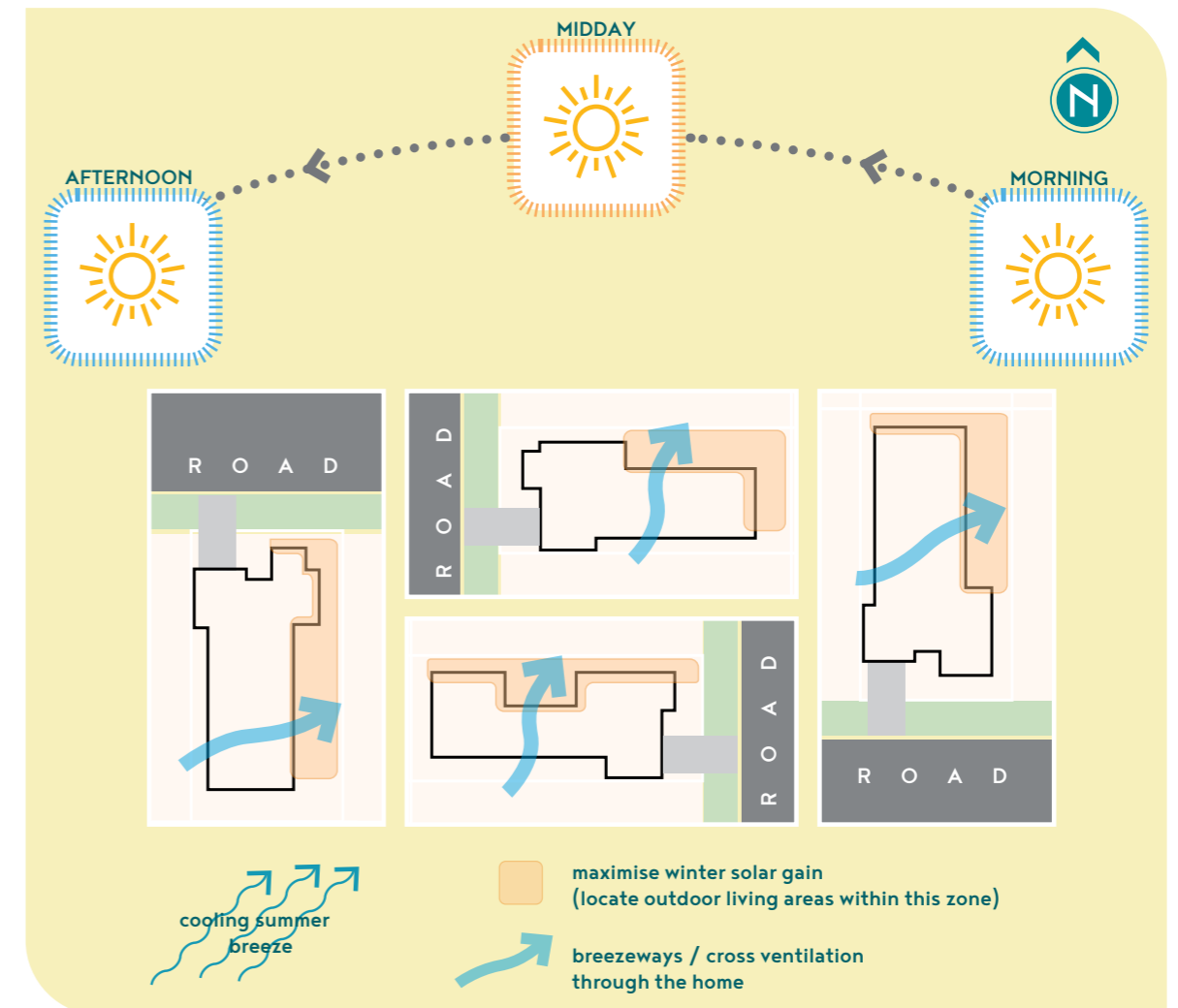
4. What you can do inside your home at Brabham

4.1 Your Home Design

Passive design is a method that works with the local climate to keep your home comfortable all year round, reducing the need for extra heating or cooling, which accounts for about 40%² of energy use in the average Australian home. By following these six design tips, you can maximise natural light, stay cool in summer, warm in winter, and significantly lower your energy bills. A well designed passive home offers lasting thermal comfort, lower energy costs, and reduced greenhouse gas emissions.

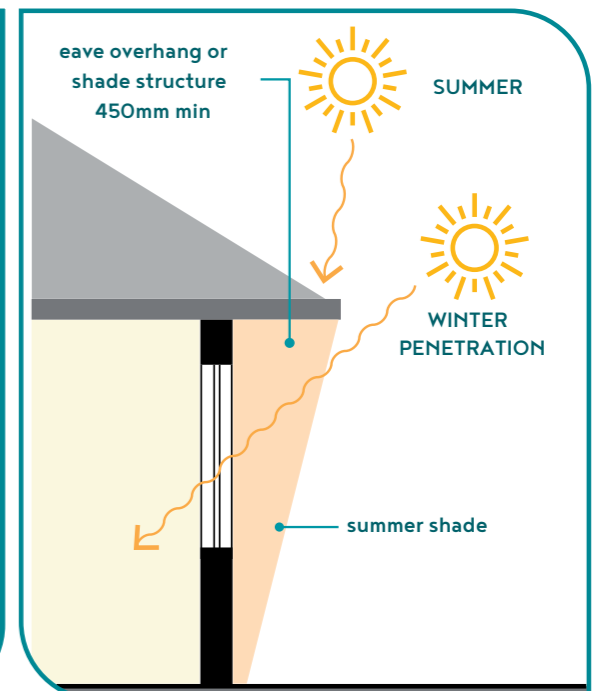


The correct orientation of your home and width of eaves will help you build a more sustainable home.



DESIGN CONSIDERATIONS

- Orient your home so that internal living spaces have north facing windows.
- Locate courtyards on the north side to maximise access to winter sunlight.
- Integrate cross ventilation opportunities into the design of your home.
- Bedrooms are ideally oriented towards the south to protect them from morning and afternoon sunlight, and maximise potential for cross ventilation.
- Windows facing west and east should be shaded in summer. Consider awnings or planting.
- Windows facing north should have eaves capable of providing protection during summer, and solar penetration during winter.



Things to ask your builder

1. Is my living room facing north to maximise natural light?
2. Can I include additional insulation that exceeds the Building Code of Australia's (BCA) requirements?
3. Are my eaves sized to help shade the summer sun? As a rule of thumb, we recommend the eaves width to be 45% of the height from the windowsill to the bottom of the eaves. For example, 450mm when the height from sill to eaves is 900-1200mm³.
4. Have my windows been placed to maximise natural light? We recommend larger windows on the north side of the home with a low U-Value and SHGC. Smaller windows should be on the east and west side of the home. See page 11 for more information.
5. Is polished concrete, timber or tile flooring in my living room an option, to keep cool on hot summer days?
6. What thermal comfort rating will my home have? In Australia a 6-Star NatHERs thermal comfort rating is mandatory for all new homes. We recommend targeting 7 Star which will help maximise natural light and reduce energy bills.

EVERY PURCHASER IN BRABHAM RECEIVES A 2 HOUR DESIGN CONSULTATION TO HELP YOU BUILD YOUR DREAM HOME.

Did you know?

The Building Code of Australia requires minimum insulation levels (measured as an R-value) based on the type of climate. For Perth, the minimum R-value for the roof or ceiling is 4.1 and walls are 2.8. The minimum R-value for ceiling insulation increases for darker roofs.

Sealing your home accounts for 15-25% winter heat loss. Ensuring your home is adequately sealed is a simple yet effective upgrade to your home.

Windows also refer to the solar heat gain coefficient or SHGC. This is how readily heat from direct sunlight flows through a window system. A lower SHGC is best.

The Window Energy Rating Scheme (WERS) can be used to view the rating of glazing and energy-related performance of window products.

Sliding windows (and doors) as well as frameless double sash and louvered windows are a great option to create better airflow.

If choosing window frames, wooden frames rather than aluminium provide a better form of insulation⁴.

Curtains and heavy drapes can be a cost-effective way of helping block out summer sun but letting in the warm winter sun.

When choosing your windows a U-Value = how readily window system conducts heat. A low U-value means your home will stay cooler.

Double glazing improves the insulation of your windows and is a great option if you have larger windows on the western side of your home.



4.2 Your Energy

Making the most of the sun's power

Solar power provides a smart alternative and is a smarter way to save on electricity costs. As part of the complimentary, 'Better Life Bonus' package, every home will receive a rebate towards a solar system.

Depending on the size of your system, you could save between \$540 and \$870 per annum on your electricity bill⁵.

Having an efficient hot water system

Water heating accounts for approximately 23% of the energy used in an average Australian home, and in some homes this is much greater (Energy Consult, 2022)⁶. You can save money and reduce greenhouse gas emissions by installing the most appropriate and efficient water heater for your household. We recommend either a heat pump hot water system or gas boosted solar hot water system.

Every home at Brabham receives a \$1,000 rebate to help upgrade to a more efficient Heat Pump System. Heat Pump Systems use only around a third of the energy used by electric storage systems⁶.

Knowing your usage

Tracking your energy usage can be made easier with a home energy display that includes real-

time metering. Programmable control of power management and devices in your home can help reduce your consumption and save you money.

The supply and install of a home energy display will be available to every new home as part of the Better Life Bonus incentive package.

Choosing efficient lighting

While individual light bulbs do not consume large amounts of electricity, the average Australian home contains 37 light bulbs⁷. So choosing efficient and well-designed lighting can still save you energy and money. Switching to more energy-efficient lighting (such as LED) can reduce energy consumption as LED bulbs use around 80% less electricity to produce the same amount of light as a halogen bulb⁷.

Designing your house to maximise natural daylight paired with well-designed electric lighting, can also play a role in energy efficiency.

Future proof your garage

In the future, more people will be driving electric vehicles. You can future proof your garage by including a 3 phase power point for electric vehicle charging. This is a simple adjustment during the build of your home, but can be an expensive retrofit.

4.3 Your Kitchen

Your kitchen is home to most household appliances and can use a lot of energy. Fridges and freezers account for around 10% of household energy bills⁸.

It is therefore important to select energy-efficient products to reduce electricity costs.

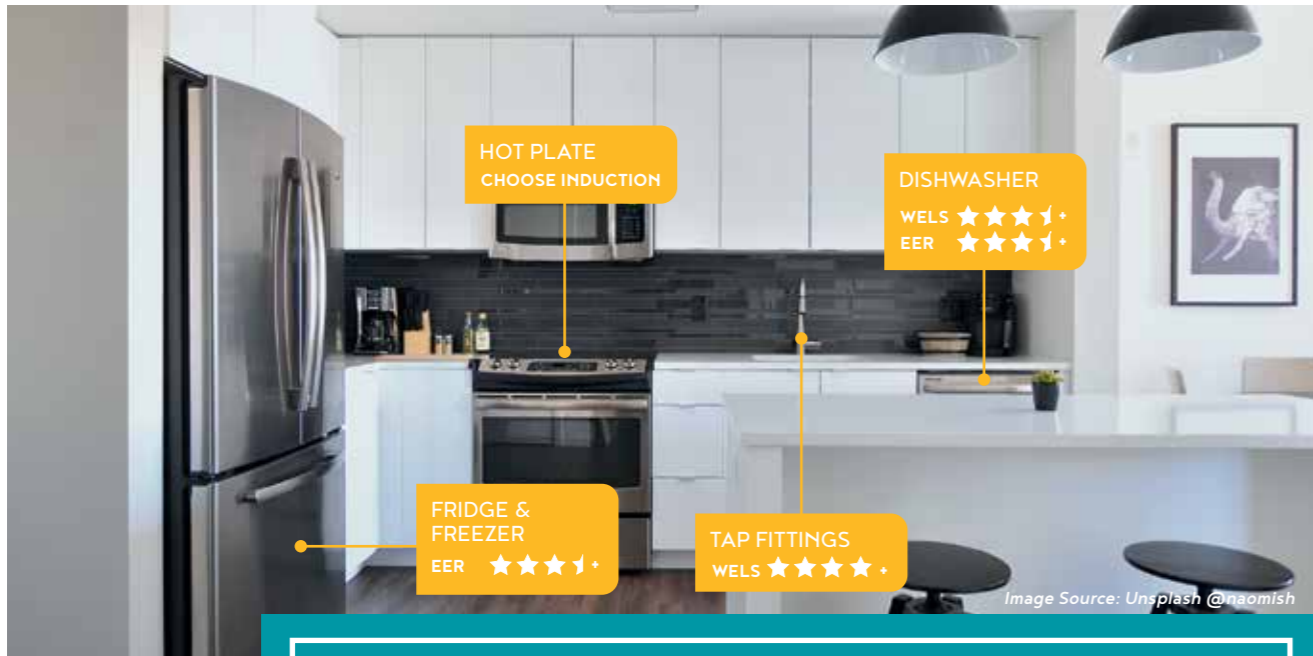
What uses the most electricity in your home?



The Energy Efficiency Rating (EER) and Water Efficiency Labelling and Standards (WELS) provide a framework to determine the energy and water performance of an appliance. The following recommendations will ensure a more efficient system than the average available on the market.

APPLIANCE	RECOMMENDATIONS
Dishwasher	<ul style="list-style-type: none"> Aim for WELS 3.5 stars or higher and EER 3.5 stars or higher. A delayed start function is beneficial to take advantage of cheaper energy tariffs and/or solar production.
Hot Plate	<ul style="list-style-type: none"> From an energy efficiency point of view, induction provides the most efficient distribution of heat and can be powered by your solar system. If you opt for an electric hot water system, then choosing induction will also remove the cost and requirement for a gas connection.
Fridge and Freezer	<ul style="list-style-type: none"> Aim for EER 3.5 stars or higher. Allow an extra 5cm of space where the fridge will go and 10cm at the top and back for ventilation. If possible, position the fridge away from direct sunlight, heaters, dishwashers and ovens. Set the fridge between 3°C and 4°C and the freezer between -15 and -18°C (setting the temperature lower than needed will use more energy)⁸.
Tap Fittings	<ul style="list-style-type: none"> Aim for WELS 4 Star or higher.

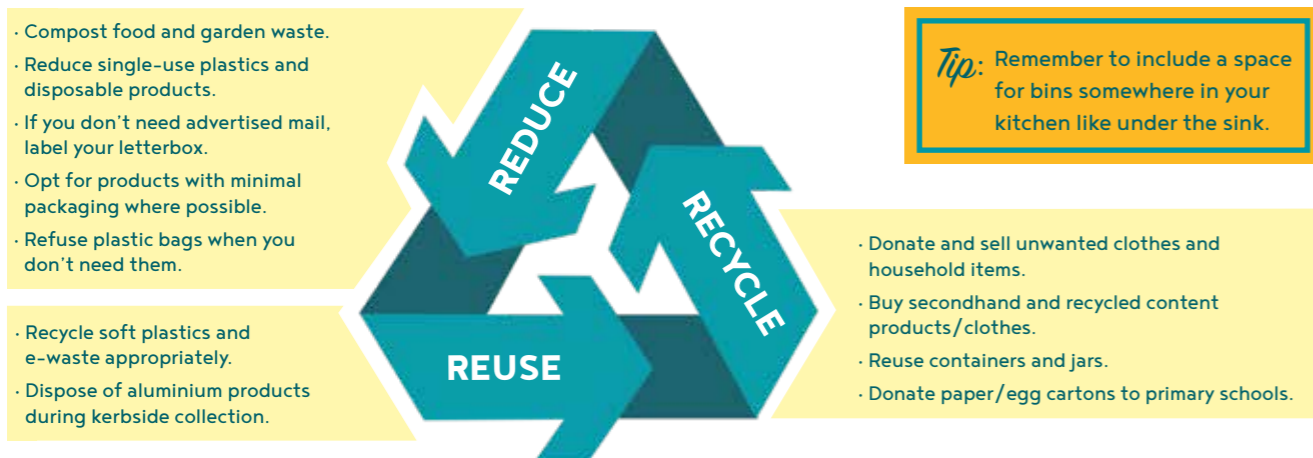




When buying appliances look for the energy rating sticker. Aim for a high number of stars and a low energy consumption. Compare different models at www.energyrating.gov.au

Combatting waste in your home

In Australia, we waste more than 30% of the food we purchase, throwing away around 3.1 megatonnes (Mt) of food each year. Of this, 2.54 megatonnes of food waste was from our homes, costing Australian households between \$2,200 to \$3,800 a year⁹. When rotting food ends up in landfill it turns into methane, a greenhouse gas that is particularly damaging to the environment. The following diagram provides actions on how you can reduce your waste contribution at home to lower your environmental harm and save money.



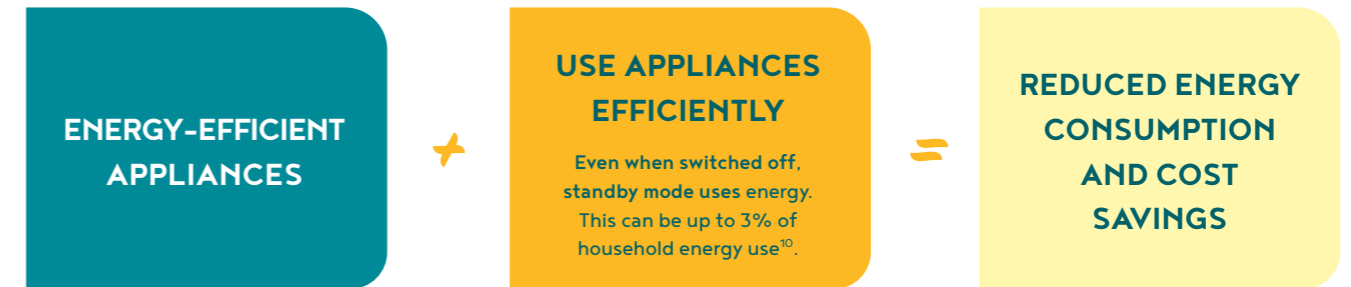
The bathroom, toilet, and laundry tend to be areas within your home where chemical use is high. To reduce the amount of chemicals and waste going down the drain, consider using natural alternatives like bicarbonate of soda or white vinegar with water and a soft cloth for effective cleaning. You can also:

- Reuse containers and opt for refills.
- Choose toothbrushes and razors with replaceable heads.
- Refill liquid soap dispensers.
- Buy toilet paper made from recycled or plantation-sourced materials.
- Recycle paper and cardboard products.

4.4 Your Living Area

Appliances and fixtures

Household appliances and equipment including your kitchen and laundry appliances, TV, home entertainment, and office equipment, are all key factor in the energy use of your home. Home appliances and equipment use an average of 25% of household energy¹⁰.



The following table provides advice on common appliances and fixtures.

APPLIANCE/FIXTURES	RECOMMENDATIONS
Air Conditioner	<ul style="list-style-type: none"> Use the star ratings for your climate zone on the Zoned Energy Rating Label to compare the energy efficiency of similar sized appliances. Remember the more stars there are, the more efficient the air conditioner is, and the more money you will save on running costs each year. Ensure the system is sized correctly based on the size of your room. Ask for the ability to zone your air conditioner so that only certain areas are being conditioned (for instance only living areas during the day).
TV	<ul style="list-style-type: none"> TVs vary in energy consumption based on several factors: <ul style="list-style-type: none"> Size: Larger screens use more energy. Screen type: OLED, LED, and LCD models are generally more efficient than plasma. Brand: Some brands offer more energy-efficient models, while cheaper TVs are often less efficient. Viewing habits: Lowering brightness and turning off standby mode can reduce energy use. With these variables, comparing TVs can be tricky, which is why star ratings are useful for assessing energy efficiency¹¹.
Lights*	<ul style="list-style-type: none"> Aim for LED lighting throughout the home. Directed lighting for tasks or features such as using lamps is more efficient than trying to make the entire room brightly lit. Maximise the use of daylight in your home through design. Consider implementing skylights. <p><i>*This can differ with user behaviour, lighting technology and design.</i></p>

Table continues on next page.

Table continued from previous page.

APPLIANCE/FIXTURES	RECOMMENDATIONS
Dryer	<ul style="list-style-type: none"> · Consider if you need a dryer or if you can dry your clothes outside. · Clothes dryers are energy-hungry appliances, so look for the most efficient dryer you can afford. A 6-star dryer uses approximately half the electricity of a 2-star dryer¹⁰.
Washing Machine	<ul style="list-style-type: none"> · Choose a model that is the right size for your needs. · Front loaders are normally more energy and water efficient. · Look for models with dual water connections (hot and cold) to avoid only using an internal heater to heat water if cold is only available. · Ask your provider if the machine heats water internally for a cold wash program (some machines may heat water during cold wash to dissolve detergent in colder climates e.g. Europe). · Look for models with eco cycle- save both energy and water. · Higher speed models extract more moisture to avoid using a dryer.
Toilet	<ul style="list-style-type: none"> · Aim for WELS of 4 Star or higher.
Shower Rose	<ul style="list-style-type: none"> · Aim for WELS 3 Star or higher.

4.5 Your Bedroom

Keeping cool in your room

Ceiling fans should be the first appliance of choice for cooling, as they are a cheaper and more energy efficient way to keep cool. However, some ceiling fans provide more energy savings than others. Consider fans with DC motors as they use about 30 watts, or half the energy of a traditional fan and are generally quieter and more compact².

In addition, the orientation of your home will assist with maximising your homes heating and cooling efficiencies. It is recommended that you, build close to the southern boundary of your site to protect solar access, locate living areas on the north side of the home to take advantage of winter sun, and avoid west-facing bedrooms to maintain sleeping comfort¹³.



Image Source: Beacon Lighting

4.6 Bringing the outside inside

Not only are indoor plants aesthetically pleasing for design, they contribute to an overall positive and healthy home environment.

BENEFITS OF INDOOR PLANTS

Indoor plants absorb heat to keep your home naturally cool.

These include:

- Aloe Vera
- Devil's Ivy
- Bamboo Palm
- Weeping Fig
- Peace Lily
- Ferns

Plants remove toxins from air - up to 87% of volatile organic compounds (VOCs) every 24 hours¹².

Plants release roughly 97% of the water they absorb, which can help reduce respiratory issues. Studies show that indoor plants can decrease cases of dry skin, colds, sore throats, and dry coughs¹².

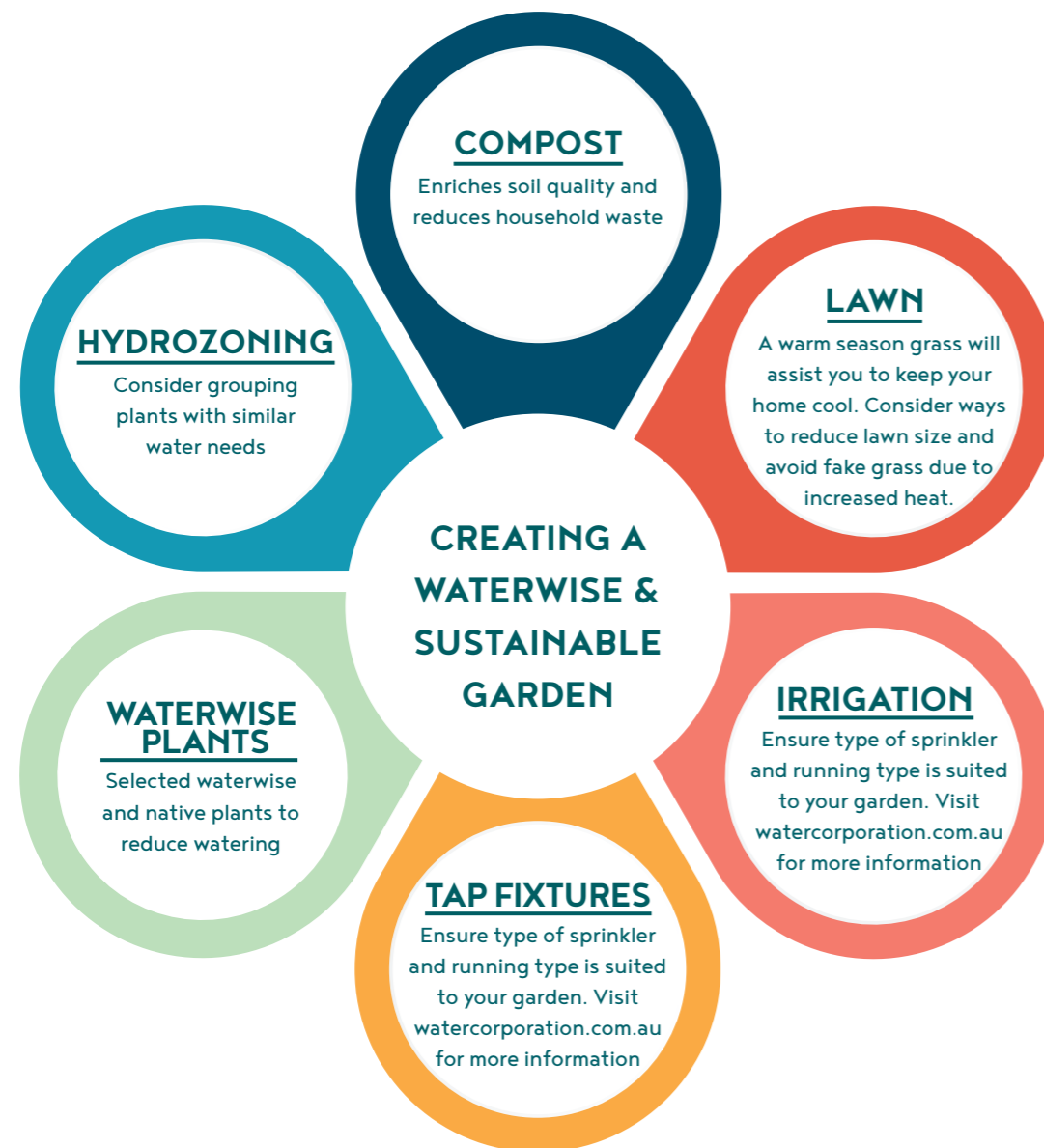
Studies have shown that people have demonstrated 70% greater attentiveness when in rooms containing plants¹².



Image Source: ProFlowers

4.7 Your Garden

According to the Water Corporation, the average household uses around 60% of their water in the garden¹⁴. See the diagram below for ideas on how to create a waterwise and sustainable garden.



References

GENERAL REFERENCES

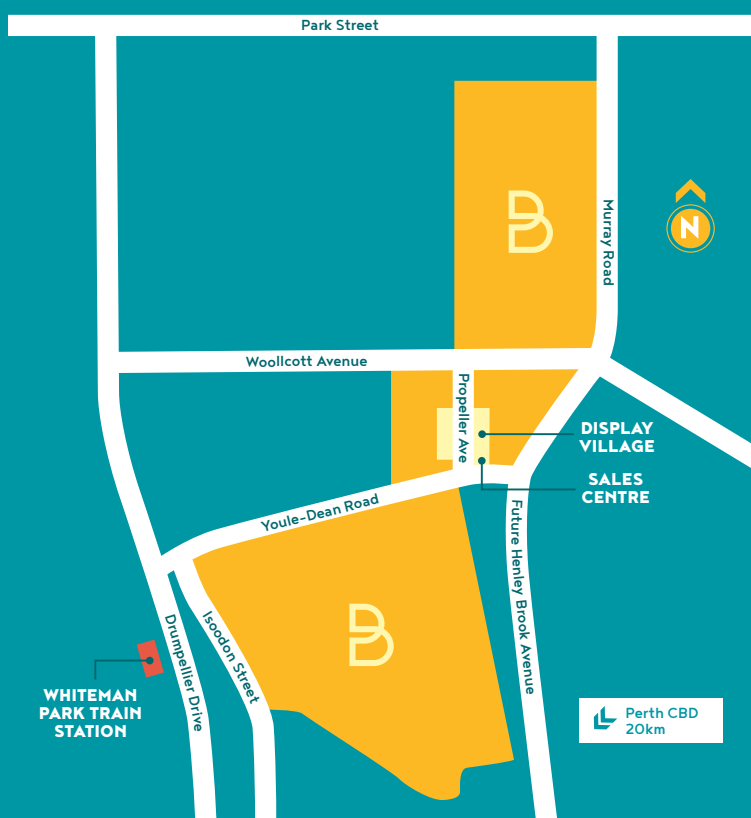
- Australian Government (2021a) 'Energy'. Available at: <https://www.yourhome.gov.au/energy> (Accessed October 2024).
- Australian Government (2021b) 'Energy. Heating and Cooling'. Available at: <https://www.yourhome.gov.au/energy/heating-and-cooling> (Accessed October 2024).
- Australian Government (2021c) 'Shading'. Available at: <https://www.yourhome.gov.au/passive-design/shading> (Accessed October 2024).
- Australian Government (2021d) 'Passive Design. Glazing'. Available at: <https://www.yourhome.gov.au/passive-design/glazing> (Accessed October 2024).
- Infinite Energy (2024) '2kW Solar System'. Available at: <https://www.infiniteenergy.com.au/solar-system-sizes/2kw-solar-system> (Accessed October 2024).
- Australian Government (2021f) 'Energy. Hot Water Systems'. Available at: <https://www.yourhome.gov.au/energy/hot-water-systems> (Accessed October 2024).
- Australian Government (2021g) 'Energy. Lighting'. Available at: <https://www.yourhome.gov.au/energy/lighting> (Accessed October 2024).
- Commonwealth of Australia (2024a) 'Household Appliances'. Available at: <https://www.energy.gov.au/households/appliances> (Accessed October 2024).
- Commonwealth of Australia (2024b) 'Reducing Waste'. Available at: <https://www.energy.gov.au/households/reducing-waste> (Accessed October 2024).
- Australian Government (2021h) 'Energy. Appliances'. Available at: <https://www.yourhome.gov.au/energy/appliances> (Accessed October 2024).
- Red Energy Pty Ltd (2024) 'What Type of TV is the Most Energy Efficient'. Available at: <https://www.redenergy.com.au/living-energy/appliances/what-type-of-tv-is-the-most-energy-efficient> (Accessed October 2024).
- Bioadvanced (2024) 'Five Benefits of Houseplants'. Available at: <https://bioadvanced.com/5-benefits-houseplants> (Accessed October 2024).
- Australian Government (2021i) 'Passive Design. Orientation'. Available at: <https://www.yourhome.gov.au/passive-design/orientation> (Accessed October 2024).
- Water Corporation (2024) 'How much water does my garden need'. Available at: <https://www.watercorporation.com.au/Help-and-advice/Waterwise/Garden/How-much-water-does-my-garden-need> (Accessed October 2024).

IMAGE REFERENCES

- Agoda Company Pte. Ltd. (2019). Available at: <https://www.agoda.com/en-au/coonanga-beach-house/hotel/sydney-au.html?cid=-218> (Accessed 10 January 2020).
- Unsplash (n.d). Available at: <https://unsplash.com/photos/L7EwHkq1B2s> (Accessed 11 January 2020).
- Unsplash (n.d). Available at: https://unsplash.com/photos/MP0bgaS_d1c (Accessed 11 January 2020).
- Beacon Lighting. (n.d.) 'Aria 132cm Fan only in Black'. Available at: <https://www.beaconlighting.com.au/aria-132cm-fan-only-in-black> (Accessed 10 January 2020).
- Provide commerce. (2019) '21 Small Indoor Plants for Apartment Living'. Available at: <https://www.proflowers.com/blog/small-indoor-plants> (Accessed 10 January 2020).



BRABHAM



Sales and Information Centre

53 Propeller Avenue
Renee Monteleone: 0438 387 449

Stay Connected on Facebook

@BrabhamEstate

brabhamestate.com.au