

The built environment: Emissions and waste



40%

27% Building operations

13% Building materials and construction

The built environment generates **40%** of annual global CO2 emissions.¹

Construction creates an estimated third of the world's overall waste.²

Approaches to sustainable building



Net Zero

Utilising passive design, energy-efficient appliances and renewable energy systems to create buildings wherein their total energy production minus their total energy use equals zero.



Passive House

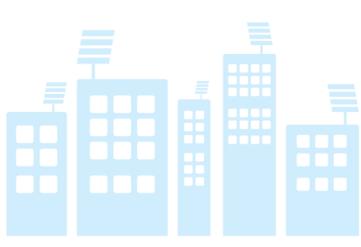
A set of highly-engineered energy efficiency and design standards that use environmental factors, such as passive solar, to keep energy use as low as possible.



Living Buildings

Regenerative buildings that connect occupants to light, air, food, nature, and community. Self-sufficient and remain within the resource limits of their site. living-future.org

What are the guiding principles across these different methodologies?



- Proper site selection
- **Optimal energy use**
- **Managing water supplies**
- Improving indoor environmental quality
- Operations and maintenance
- **Durability and longevity**
- **Sustainable building materials and products**

Applying sustainable thinking to filtered water systems

Problem

Australians spent about **\$580** buying **504 litres of bottled water per person**.

It takes a greater amount of water in a bottle of water to make it as it does to fill it.

80% of plastic waste ends up in landfills or in the natural environment.



80%

of plastic waste



Solution

Identifying sustainable water solutions is an essential requirement to reduce the environmental footprint of buildings and create long-term value for customers.



Why Billi?

With its state-of-the-art water filtration systems, Billi sets new standards in environmental sensitivity, helping businesses to reduce their carbon footprint.

Provides a sustainable alternative for drinking water, reducing demand for single-use plastic bottled water.

Product innovations

- Billi Eco, Quadra and Quadra Plus products are certified Gold Level under Global GreenTag standards.
- Billi's patented technology recovers and reuses energy to preheat the boiling water, thereby saving energy.
- Unique power consumption advantages, including thermodynamic heat-exchange technology, high-performance polyethylene insulation, and stand-by modes to conserve power.

Company initiatives

- Billi offers borosilicate (glass) water bottles to avoid disposable solutions or single-use plastic bottles.
- Reduced the number of plastics in their packaging, preferring to use only recycled materials where possible.
- Reduced printing and energy consumption by using QR codes for brochures and guides.

Operations

Billi's total commitment to sustainability extends across its entire operation. Take, for example, Billi's manufacturing plant in Thomastown. **Solar covers 38%** of the factory's total consumption. With its approximately 600 solar panels and six 20kW inverters, the factory generated 166MWh of energy in 2022, 94MWh of which was used onsite and 72MWh fed back to the grid.



Building design for a sustainable future:

Filtered water systems

[DOWNLOAD THE WHITEPAPER](#)



Billi Instant Filtered Water Systems

For more than 25 years, Billi has been the market leader in high performance water filtration solutions for healthy and sustainable work and living spaces. Billi's reputation for quality and reliability is globally renowned, pairing state of the art Australian manufacturing with strong research and development capabilities.

Every Billi drinking water appliance is manufactured under a certified quality control system. All Billi commercial range models have been tested and comply with all required standards and more, including:

- Watermark
- WELS
- ISO 9001
- HACCP
- AS/NZS 4020
- AS 1428
- Gold Level Global GreenTag
- International WELL Building Institute Membership

REFERENCES

¹ <https://architecture2030.org/why-the-building-sector/>

² https://ec.europa.eu/environment/topics/waste-and-recycling/construction-and-demolition-waste_en