



## Householders' Options to Protect the Environment Inc.

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ABN 48 036 173 161

### HOPE E-news Bulletin 2023 #08 --- Special Edition on Sustainable Building

The following items have been gathered from various e: newsletters received by HOPE in recent times; and/or prepared specifically by HOPE members and supporters. If you have any news to contribute, please forward to [office@hopeaustralia.org.au](mailto:office@hopeaustralia.org.au). Deadline for articles is 15<sup>th</sup> day of the month.

#### Editorial

Dear fellow environment stewards,

This special edition of the newsletter focuses on Sustainable Building.

Sustainable building, also known as green building, refers to the design, construction, and operation of buildings which target on reducing their environmental impact and enhancing resource efficiency. Sustainable building practices aim to minimize energy consumption, reduce greenhouse gas emissions, conserve water, enhance indoor air quality, and promote the use of renewable materials.

Internationally, sustainable building practices have gained significant attention and have been adopted by many countries and organizations. Some of these sustainable building platforms are highlighted in the following articles.

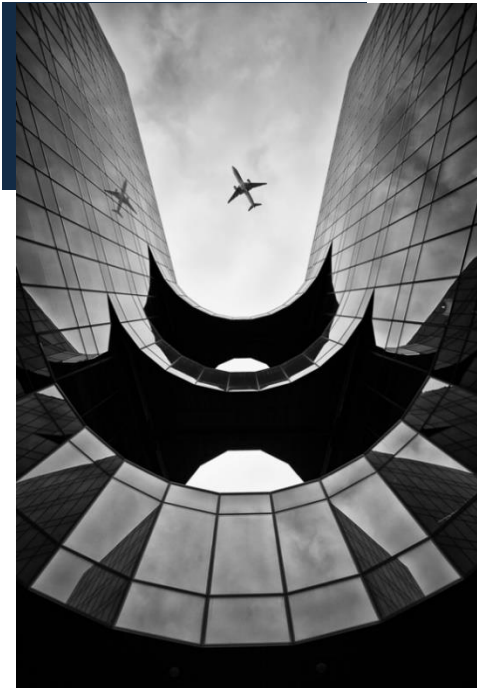
A huge thanks to Frank Lee, our volunteer researcher from NSW, for writing all of these articles.

Kind regards,

Frank Ondrus, Office Manager – HOPE Inc.

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#### 1: [World Green Building Council](#)



The World Green Building Council (WorldGBC) is a global network of Green Building Councils (GBCs) working towards promoting sustainable and environmentally friendly building practices worldwide.

WorldGBC aims to create green buildings for everyone, everywhere, by driving the sustainable transformation of the building sector, advocating for green building policies, conducting research, disseminating knowledge, and collaboration among stakeholders. The key objectives include Advancing Net Zero Carbon Buildings, Promoting Health and Well-being Environments, Driving Sustainable Construction, and Advocating for Policy Change.

GBCs span over 70 countries, representing thousands of organizations and professionals committed to sustainable building. WorldGBC leads several initiatives and programs to drive sustainability in the building sector:

1. **Advancing Net Zero** focuses on accelerating the global transition to net-zero carbon buildings by 2050.
  2. **Better Places for People** promotes the integration of health and well-being considerations in building design and operation.
  3. **Building Efficiency Accelerator**, in partnership with the United Nations' Sustainable Energy for All initiative, leads this program to drive energy efficiency in buildings.
  4. **Sustainable Finance** focuses on mobilizing investment in green building projects.
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## 2: [Sustainable buildings - United Nations Environment Programme](#)



The United Nations Environment Programme (UNEP) promoting sustainable buildings worldwide by providing technical assistance, policy guidance, and capacity building to governments, professionals, and stakeholders in the construction industry. Additionally, UNEP collaborates with international organizations, governments, and the private sector to raise awareness and advocate for sustainable building practices.

The UNEP actively promotes sustainable buildings through various initiatives and partnerships. It includes Policy Development, Capacity Building, Awareness and Advocacy, and Knowledge Sharing. It achieves the construction of energy-efficient and green-certified buildings, the reduction of carbon emissions, the creation of green jobs, and the improvement of living conditions in communities.

UNEP has developed several key strategies and initiatives to drive the adoption of sustainable buildings globally. These include:

1. **Global Alliance for Buildings and Construction (Global ABC):** aims to promote the transition towards low-carbon and energy-efficient buildings.
2. **Net Zero Carbon Buildings Commitment:** encourages the building and construction sector to reach net-zero operational carbon emissions by 2050.
3. **Sustainable Building and Construction Program:** focuses on promoting sustainable building practices in developing countries.
4. **Green Building Finance:** works on mobilizing finance for sustainable buildings by engaging with financial institutions, investors, and the private sector.

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## 3: [Sustainable Cities and Communities – World Bank](#)



With the majority of the global population residing in urban areas, World Bank has established a comprehensive framework to support the creation of sustainable cities and communities. Through various initiatives, investments, and partnerships, the World Bank aims to address urban challenges and

build resilient urban spaces for future generations. The approach to sustainable cities revolves around three key pillars: environmental sustainability, social inclusiveness, and economic competitiveness.

The World Bank encourages public-private partnerships to mobilize additional resources and expertise for sustainable urban development projects. These partnerships facilitate collaboration between governments, private sector entities, and civil society to implement innovative solutions, improve service delivery, and attract investments. World Bank initiatives for

1. Sustainable Cities include The Global Platform for Sustainable Cities (GPSC), Urbanization Reviews, and City Resilience Program.
2. Sustainable Urban Infrastructure include Green Infrastructure, Sustainable Urban Transport Systems, and Affordable Housing
3. Data-Driven Urban Planning identify opportunities, and develop evidence-based policies.

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## 4: [European Sustainable Cities Platform](#)



The European Sustainable Cities Platform (ESCP) is an innovative initiative aimed at promoting sustainable urban development across Europe. It serves as a collaborative platform where cities, stakeholders, and experts come together to exchange knowledge, share best practices, and implement sustainable solutions.

The aims of ESCP are Facilitate collaboration, Share best practices, Promote innovation, and Advocate for policy change. Key Features:

1. **Knowledge Hub** serves as a central repository of information on sustainable urban development.
2. **Collaboration Spaces** connect, exchange ideas, and engage in discussions on various sustainability topics.
3. **Capacity Building** workshops, training programs, and webinars to enhance the knowledge and skills of city officials and professionals involved in urban planning and development.
4. **Project Support** helps cities develop and implement sustainable urban projects.

The ESCP has had a significant positive impact on European cities, contributing to their sustainable development in several ways Knowledge Transfer, Policy Influence, Collaboration and Partnerships, Innovation and Technology Adoption.

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## 5: [Goal 11: Sustainable Cities and Communities](#)



sustainability.

Sustainable development Goal 11 (SDG 11) is a part of the United Nations' 2030 Agenda for Sustainable Development. It aims to ensure that cities and human settlements are inclusive, safe, resilient, and sustainable. SDG 11 recognizes the crucial role in economic growth, social progress, and environmental

Creating sustainable cities and communities is crucial for Environmental Sustainability, Social Inclusion and Equity, Economic Growth and Innovation, Resilience and Adaptation. Key Objectives of SDG 11 consist of Inclusive and Safe Cities, Sustainable Urban Planning and Design, Affordable and Sustainable Housing, Resilience to Disasters and Climate Change, Access to Safe and Inclusive Public Spaces. SDG 11 Targets and Indicators include:

1. Affordable housing and slum upgrading
2. Sustainable transport systems
3. Inclusive and sustainable urbanization
4. Protecting cultural and natural heritage
5. Reducing the adverse environmental impact of cities
6. Universal access to safe, inclusive, and accessible green spaces
7. Enhancing urban resilience to disasters and climate change
8. Strengthening national and regional development planning
9. Integrating policies for sustainable development in cities
10. Supporting least developed countries in sustainable urban development

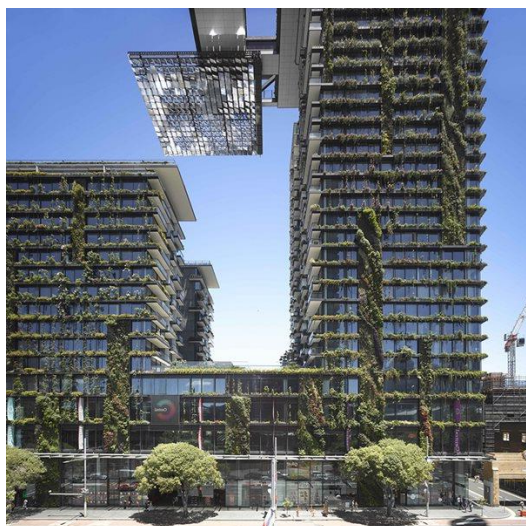
Sustainable building practices are continuously evolving, and new technologies and strategies are being developed to further enhance the sustainability of buildings both internationally and in Australia. Below are some sustainable building practices adopted in Australia:

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## 6: [Standards Australia](#)



Australia is at the forefront of sustainable building practices, and Standards Australia plays a significant role in establishing guidelines and standards for the construction industry. As the nation embraces a greener and more sustainable future, Standards Australia has developed a wide range of standards that promote environmentally-friendly building practices, energy efficiency, waste reduction, and the use of sustainable materials.



Through a comprehensive range of standards covering energy auditing, construction techniques, sustainable forest management, prefabricated buildings, roofing, polymeric products, and fire safety, Standards Australia provides the construction industry with guidelines and benchmarks for achieving environmentally-friendly and resource-efficient buildings. Typical standards as follows AS 3598: Energy Auditing - Commercial Buildings, AS 4654.1: Residential Slabs and Footings – Construction, AS 5389: Prefabricated Buildings, AS 4708: Sustainable Forest Management, AS 4656: Domestic Metal Roofing, AS/NZS 4663: Polymeric Building Products, AS 4657: Fire Safety for Tall Buildings.

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## 7: [Housing Industry Association](#)



The Housing Industry Association (HIA) plays a pivotal role in advocating and promoting sustainable building practices within the construction industry. As the leading association for Australia's residential building industry, the HIA actively supports and encourages environmentally friendly approaches to construction and housing. It consists of:

1. **HIA's Commitment to Sustainability:** sustainable building practices in addressing climate change, reducing environmental impact, and ensuring long-term economic stability.
  2. **Building Green Smart Program:** a comprehensive framework that promotes sustainable building practices.
  3. **GreenSmart Professionals:** recognizes industry professionals who demonstrate expertise in sustainable building practices.
  4. **Policy Advocacy:** engages in policy advocacy to promote sustainable building practices at the government level.
  5. **Research and Innovation:** invests in research and innovation to drive advancements in sustainable building practices.
  6. **Industry Education and Training:** offers a range of educational programs, workshops, and training courses to promote sustainability within the building industry.
  7. **Collaboration and Partnerships:** collaborates with various organizations, including government agencies, industry associations, and environmental groups, to advance sustainable building practices.
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## 8: [Master Builders Queensland](#)



Master Builders Queensland (MBQ) is a leading industry association representing the building and construction sector in Queensland, Australia. MBQ through advocacy, education, research, and collaboration, promotes the adoption of environmentally friendly construction methods, materials, and technologies. It includes:

1. **Advocacy for Sustainable Building:** engage with government bodies, industry stakeholders, and the public to promote policies and regulations that encourage environmentally responsible construction.
  2. **Training and Education:** offer a range of courses, workshops, and seminars to help builders, contractors, and project managers understand the principles of sustainable construction.
  3. **Green Building Certifications:** provide guidance and resources to help builders navigate the certification process and meet the stringent sustainability criteria.
  4. **Research and Innovation:** support research projects that explore new materials, technologies, and construction methods aimed at reducing environmental impact.
  5. **Sustainable Materials and Technologies:** encourage the adoption of energy-efficient appliances, renewable energy systems, water-saving fixtures, and recycled building materials.
  6. **Waste Management and Recycling:** advocate for responsible waste disposal on construction sites and promote recycling initiatives to reduce landfill waste.
  7. **Collaboration and Networking:** organize conferences, seminars, and forums where experts, architects, builders, and contractors can exchange ideas and experiences related to sustainable construction.
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## 9: [Griffith University](#)



Griffith University, located in Queensland, Australia, is renowned for its research and innovation in sustainable development. Griffith University's commitments to sustainable cities and communities through its research, education, partnerships, and community engagement.

1. **Research and Innovation:** conducts extensive research on sustainable building practices, aiming to develop innovative solutions that minimize environmental impact.
2. **Sustainable Urban Planning:** sustainable urban planning plays a crucial role in creating sustainable cities and communities.
3. **Education and Training:** offers a range of educational programs and courses dedicated to sustainable building and urban development.
4. **Collaborative Partnerships:** collaborates with industry partners, government agencies, and community organizations to promote sustainable building in cities and communities.

5. **Community Engagement:** engages with local communities to raise awareness about sustainable building practices and their benefits.
  6. **Policy and Advocacy:** collaborate with government bodies and industry stakeholders to provide evidence-based recommendations for sustainable urban development.
  7. **Demonstration Projects:** showcases sustainable building practices through demonstration projects.
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## 10: [Liveable Cities Conference: Webinar Series 2020](#)



The Liveable Cities Conference is an event that brings together experts, professionals, and policymakers to discuss and explore strategies for creating sustainable and liveable cities. The sessions explored various aspects of sustainable building, including energy efficiency, green infrastructure, resilient design, and innovative construction techniques.

The webinar series featured renowned experts and practitioners in the field of sustainable building, including:

1. Architects specializing in green design and sustainable construction techniques.
  2. Urban planners and policymakers with expertise in sustainable urban development.
  3. Researchers and academics contributing to advancements in sustainable building materials and technologies.
  4. Representatives from leading sustainability organizations and initiatives.
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## 11: [Sustainable House Day](#)



Sustainable House Day is an event held in Australia that provides an opportunity for homeowners and builders to showcase environmentally progressive homes. The Objectives of the event are Education and Inspiration, Exchange of Knowledge, and Promoting Sustainable Building Industry.

Notable Sustainable House Day examples are The Zero Carbon House, The Water-Wise Home and The Passive House. The environmentally progressive homes include:

1. **Energy-Efficient Design:** prioritize energy efficiency by incorporating passive design principles such as orientation, insulation, and natural ventilation.
  2. **Renewable Energy Systems:** integrate renewable energy systems like solar panels, wind turbines, and geothermal heating and cooling systems.
  3. **Water Conservation:** employ water-saving strategies such as rainwater harvesting, greywater recycling, and efficient plumbing fixtures to conserve water resources.
  4. **Sustainable Materials:** utilize sustainable building materials such as recycled timber, reclaimed bricks, and low-toxicity paints.
  5. **Smart Home Technologies:** incorporate smart home technologies to optimize energy use.
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## 12: [Architecture and Design](#)



Sustainable architecture is a vital approach to address environmental challenges and create buildings that minimize their ecological footprint. Green building designs prioritize energy efficiency, resource conservation, and the use of environmentally friendly materials. Measuring sustainability in construction include:

1. The **Environmental Product Declaration (EPD)** provides a good indication of the environmental performance of a building product.
2. **BREEAM (Building Research Establishment Environmental Assessment Methodology)** is used in the United Kingdom to assess and mitigate the lifecycle impacts of buildings on the environment.
3. **LEED (Leadership in Energy and Environmental Design)** – is a globally recognised green building rating system for practically all types of buildings.
4. **NatHERS (Nationwide House Energy Rating Scheme)** – is an Australian rating system that assesses the energy efficiency of a home and rates it out of 10 stars.
5. The **WELL Building Standard** tool monitors, measures and certifies built environment features that impact human health and wellbeing.

The eight green building designs discussed in this article exemplify the possibilities of sustainable architecture”

- The Sociable Weaver, Cape Paterson, Victoria, Australia (2017),
- Sekisui House, Sydney, NSW, Australia (2013),
- Australian Islamic Centre, Melbourne, Victoria, Australia (2017),
- 7 More London Riverside, London, England (2009),
- The Amherst College New Science Center, Amherst, Massachusetts, USA (2018),
- Asilong Christian High School, Asilong, West Pokot, Kenya (2018),
- Oregon Zoo Education Center, Portland, Oregon, USA (2018),
- St. Patrick's Cathedral, New York, New York City, USA (2018).

### References:

- 1: World Green Building Council: <https://worldgbc.org>
- 2: Sustainable Buildings: <https://www.unep.org/explore-topics/resource-efficiency/what-we-do/cities/sustainable-buildings>
- 3: Sustainable cities and communities: <https://www.worldbank.org/en/topic/sustainable-communities>
- 4: European Sustainable Cities Platform: <https://sustainablecities.eu/conferences/about-the-series/>
- 5: Goal 11: Sustainable Cities and Communities: <https://www.globalgoals.org/goals/11-sustainable-cities-and-communities/>
- 6: Standards Australia: <https://www.standards.org.au>
- 7: Housing Industry Association: <https://hia.com.au>
- 8: Master Builders Queensland: <https://www.mbqld.com.au>
- 9: Griffith University: <https://www.griffith.edu.au>
- 10: Liveable Cities Conference webinar series in 2020: <https://liveablecities.org.au>
- 11: Sustainable House Day: <https://sustainablehouseday.com>
- 12: Sustainable Architecture: 8 Best Green Building Designs: <https://www.architectureanddesign.com.au/features/list/sustainable-architecture-8-best-green-buildings>