LIGHTBODY ARCHITECTS

SUSTAINABILITY ACTION PLAN 2023

Introduction

Lightbody Architects understands that there is an urgent requirement to address the ongoing climate and biodiversity emergency. We seek to commit to minimise our environmental impact and contribute positively to the built environment by adopting a Sustainability Action Plan (SAP).

We refer to the 'Australian Architects Declare Climate and Biodiversity Emergency' deceleration to provide a framework of our document structure.

"The twin crises of climate breakdown and biodiversity loss are the most serious issue of our time. Globally, buildings and construction play a major part, accounting for nearly 40% of energy-related carbon dioxide (CO_2) emissions whilst also having a significant impact on our natural habitats. Meeting the needs of our communities and staying within our ecological limits will require a shift in our behaviour as well as the design, delivery and performance of our buildings. Together with our clients, we will need to commission and design buildings, cities and infrastructures as indivisible components of a larger, constantly regenerating and self-sustaining system.

The research and technology exist for us to begin that transformation now, but what has been lacking is collective will. Recognising this, we are committing to strengthen our working practices to create architecture and urbanism that has a more positive impact on the world around us.

We will seek to:

1. Raise awareness of the climate and biodiversity emergencies and the urgent need for action amongst our clients and supply chains.
2. Advocate for faster change in our industry towards regenerative design practices and a higher Governmental funding priority to support this.
3. Establish climate and biodiversity mitigation principles as the key measure of our industry's success: demonstrated through awards, prizes and listings.
4. Share knowledge and research to that end on an open-source basis.
5. Evaluate all new projects against the aspiration to contribute positively to mitigating climate breakdown, and encourage our clients to adopt this approach.
6. Upgrade existing buildings for extended use as a more carbon efficient alternative to demolition and new build whenever there is a viable choice.
7. Include life cycle costing, whole life carbon modelling and post occupancy evaluation as part of our basic scope of work, to reduce both embodied and operational resource use.
8. Adopt more regenerative design principles in our studios, with the aim of designing architecture and urbanism that goes beyond the standard of net zero carbon in use.
9. Collaborate with engineers, contractors, and clients to further reduce construction waste.
10. Accelerate the shift to low embodied carbon materials in all our work. Minimise wasteful use of resources in architecture and urban planning, both in quantum and in detail.In Australia, we as architects are aware that Aboriginal and Torres Strait Islander peoples have long espoused the cultural, social, economic and environmental benefits embedded in the holistic relationship of Caring for Country."

Retrieved - https://au.architectsdeclare.com/ accessed 07/12/23

Our Apporach

The Lightbody Architects SAP outlines our approach towards attaining sustainable outcomes as a practice. The SAP document is structured into two parts as outlined below:

1. Lightbody Architects Goal Framework:
    Design and Approach
    Evaluation and Reporting
    Outreach and Advocacy
    Training Education
    Opertation and Outlook

2. Lightbody Architects Sustainability Checklist

Lightbody Architects refers to the Australian Institute of Architects' sustainability checklist as a guide to provide a baseline standard requirement applicable to the above-mentioned outline. (General, Projection of Land and Ecological Systems, Siting and Urban Design, Energy Efficiency and Consumption, Selection of Building Materials, and Process and Social Issues). (AIA Sustainability Checklist, 2023)

Lightbody Architects will also utilise to project-specific third-party sustainability certification programs such as the National Australian Built Environment Rating System (NABERS), Nationwide House Energy Rating Scheme (NatHERS), BASIX, etc.

Lightbody Architects is committed to integrating the Australian Architects Declare principles into our design methodology and business operations, educating our clients to achieve above the 'standard' sustainability targets across all phases of the projects' life cycle, and playing an active role in educating and collaborating with external consultants and the wider community.

We have reviewed our current practices and have proposed realistic incremental targets that are achievable. Through the process of reporting and evaluating our sustainability measures, we aspire to continuously contribute and have a positive effect on our environment and our community.

Design and Approach

Current Practice

Our practice believes in the importance of place-making and creative problem-solving while considering sustainable principles evident throughout the project life cycle. With have extensive experience in delivering projects that are responsive to the immediate environment.

Our Future

We will seek to integrate sustainable principles throughout the design process and look to educate our clients and consultants to advocate for sustainable design solutions. We aspire to acknowledge and be guided by First Nations cultural principles and land management.

We will look to understand each projets' embodied carbon and move towards reducing values by working collaboratively with our clients and consultant teams.

Intermediate goals

Facilitate Lightbody Architects sustainable design approach checklist throughout the design process with clients and consultants. Seek to establish the requirement with clients for a third-party sustainability certification programs such as NABERS.

Short Term Goals 2026

Working with consultants and contractors to develop strategies to reduce and recycle construction waste to be integrated into the design strategy and reviewed throughout the construction phase.

Consistently refer to and integrate sustainable design solutions with our clients and consultant teams.

Long Term Goals (5 years 2029)

Consistently collaborate with our clients, consultant teams and suppliers to ensure delivery of sustainable design outcomes.
Include life cycle costing, whole of life carbon modelling on 30% of our projects

Evaluating and Reporting

Current Practice

We do not refer to any sustainability certification programs, we do not have any strategies or methodologies for collecting post-occupancy information and data.

Our Future

We commit to collecting and using data to understand measurables such as energy, water, and embodied carbon to better inform our design process to guide sustainable design for all projects.

Intermediate goals

Participate in education programs designed to help the practice understand tools used in the evaluation and reporting process.

Short Term Goals 2026

Conduct a carbon assessment of an existing project to help establish an understanding of how to collect and utilise our understanding of energy usage.

Long Term Goal (5 years 2029)

To integrate third-party reporting and evaluation certification programs as project standard.

Integrate post-occupancy evaluations into our services and encourage and educate our clients of benefits.
Investigate a carbon offset scheme for our practice operations to be come carbon neutral.

Outreach and Advocacy

Current Practice
We as a practice have limited outreach and advocacy although are committed to integrating sustainable practices throughout operations and services.

Our Future
We aspire to ensure that we have sustainability conversations with our clients, consultants, and suppliers. We are committed to transforming our operations and service delivery to have sustainability at the forefront of our business, through the participation of employees in education programs and contribute to the wider community with knowledge sharing.

Intermediate goals
With the implementation of our SAP, we seek to encourage our clients, consultants, and employees to explore accredited sustainability programs and knowledge-sharing events to raise awareness of the urgent need to sustainable design.

Integrate our sustainability checklist to clients as a project standard

Short Term Goals 2026
Develop bi-monthly internal sustainability discussions within the practice to review and re-evaluation our sustainable design commitments and goals throughout the course of a calendar year.

Long Term Goals (5 years 2029)
To encourage and guide clients to seek sustainable design outcomes from fruition to the inception of each project.
Be an architectural practice that is recognised for delivering sustainable architecture.

Training and Education

Current Practice
We currently have limited staff involvement in sustainability knowledge sharing and programs. We encourage staff to develop their skills and knowledge base via professional advancing programs such as CPDs and supplier information sessions.

Our Future
Encourage all employees to increase their knowledge and understanding of sustainable design by facilitating in-house information sessions with external consultants.

Intermediate goals
All employees to participate in practice-facilitated sustainable design-centred CPDs

Short Term Goals 2026
Encourage individual team members to actively increase their knowledge and expertise across various areas of sustainability and then share that knowledge with the team.

Long Term Goals (5 years 2029)
Build an employee team who are passionate and are engaged in sustainable design outcomes and who are confident to educate our clients and consultant teams.

Operations and Outlook

Current Practice
Our practice is currently located in a carbon-neutral co-share office. Although we currently do not have any carbon-neutral strategies or practices in place. We currently incorporate passive design principles in all our projects and discuss passive design solutions with our clients.

Our Future
For our practice to become carbon neutral, integrate and achieve our SAP incremental goals to become a more sustainability-oriented office.

Intermediate goals (2025)
Discuss with our colleagues how our Lightbody team can contribute to the co-working space to enhance our sustainability. Discuss with our colleagues carbon-neutral options and practice integration methodology.

Short Term Goals 2026
Continue to facilitate employee knowledge sharing and participation in education programs within office hours.

Long Term Goals (5 years 2029)
Become a stand-alone carbon-neutral architectural practice with a the appropriate accreditation.

SUSTAINABILITY CHECKLIST

1.0 PROTECTION OF LAND AND ECOLOGICAL SYSTEMS		PROJECT-SPECIFIC RESPONSE
1.1	Design to create opportunities to harvest, use, or recycle on-site resources during the construction.	
1.2	Design to create opportunities to harvest, use, or recycle on-site resources during the life of the building.	
1.3	Design to include strategies to minimise pollution to air, earth, and water	
1.4	Review strategies for maintenance and enhancement of natural ecological features and systems (eg habitat corridors) Does the project include strategies to protect, support or regenerate the site's ecology?	
1.5	Review strategies for minimisation and recycling of operational waste, e.g. paper, glass, and compostables (during construction and the life of the building)	
1.6	Collaborate with contractors to reduce construction waste prior to and during construction, review opportunities to minimise and recycle - Consider collection and landfill	

2.0 SITING AND URBAN ISSUES		PROJECT SPECIFIC RESPONSE
2.1	Design the site plan to consider/site plan to consider existing usage and future usage of neighbouring sites.	
2.2	Design to create opportunities of site planning to improve passive thermal comfort in open spaces and enclosed habitable rooms	
2.3	Consider existing elements on the site, and design for retaining or adaptation. tree, buildings, materials, facilities, infrastructure	
2.4	Design to consider strategies to improve resilience and adaptation relating to climate change events including bushfire, cyclone, and floods	
2.5	Design to consider the increase in the anticipated mature tree canopy cover as compared to the existing tree canopy cover at the site.	
2.6	Design to create opportunities for the facilitation of pedestrian and non-motorised transport.	

SUSTAINABILITY CHECKLIST

3.0 ENERGY EFFICIENCY AND CONSUMPTION		PROJECT SPECIFIC RESPONSE
3.1	Design to use electricity to power the building	
	Calculate the annual estimated energy consumption (Passive House Planning Package (PHPP or Nationwide House Energy Rating Scheme	
3.2	Utilisatise passive thermal design principles to reduce the operational energy of the building	
3.3	Provide evidence of energy audits, benchmarks, targets or thermal modelling were undertaken	
3.4	Design to integrate renewable energy technology to reduce operational carbon footprint.	
3.5	Design the building to be airtight for the climate	
3.4	Design the façade of the building to exceed the NCC 2022 minimum deemed to satisfy requirements for insulation.	
3.5	Design the roof, walls, and floors of the building to exceed the NCC 2022 minimum deemed to satisfy requirements for insulation.	
3.6	Select energy-efficient fittings and fixtures	
3.7	Select an energy-efficient hot water system	
3.8	Design to reduce the reliance on heating and cooling of internal spaces	
3.9	Use energy-efficient cooking appliances	

4.0 ENERGY EFFICIENCY AND CONSUMPTION		PROJECT SPECIFIC RESPONSE
4.1	Design to select the use of renewable and/or recyclable materials and components	
4.2	Select renewable and/or recyclable materials and components	
4.3	Design to minimisation the use of non-renewable resources	
4.4	Utilise a Life-cycle assessment to measure and design to reduce embodied environmental impacts	
4.5	Design to improvements in indoor air quality and reduction of contamination and off-gassing	
4.6	Where the use of non-renewable resources has been unavoidable, provide solutions for offset embodied carbon	

SUSTAINABILITY CHECKLIST

5.0 SOCIAL ISSUES		PROJECT SPECIFIC RESPONSE
4.1	Design to improve human connections through developing community and improving the quality of people's lives.	
4.2	Design to support locally supplied and manufactured resources and skilled labour.	
4.3	Design for the inclusion of locally supplied and manufactured resources and skilled Labour.	
4.4	Design to prevent, as much as possible, the promulgation of modern slavery.	
4.5	Design to include First Nations businesses in the design, construction, and/or maintenance.	
4.6	Design for inclusion and exceed the minimum industry standards for universal design.	
4.7	Design for Health – improvement and well-being of users, connection to the environment, personal safety, and improved comfort and amenity	
4.8	Design to contribute to the local community	