

Attachment A8

Sustainability Strategy

Sustainability Strategy

580 George Street, Sydney

Project No. P02046

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Client Icon

315



E-LAB Consulting
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316

Engineering Lab NSW Pty Ltd

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E-LAB Consulting
Level 11 / 117 York Street
Sydney, NSW 2000
e-lab.com.au

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1 Introduction

1.1 Purpose

This Sustainability Strategy has been prepared by E-LAB Consulting on behalf of Icon Project Management, and forms part of the Planning Proposal for the 580 George Street, Sydney development.

The intent of this document is to identify and outline the key environmental and sustainable objectives of the project.

1.2 Project

The 580 George Street, Sydney project comprises a commercial development above a retail podium which is connected to the adjacent existing office tower. The precinct has a direct connection below ground to Town Hall Station.

1.3 Drivers

The sustainability strategy for the project is driven by the following frameworks:

- National Construction Code (NCC) 2022 - Section J Energy Efficiency
- State Environmental Planning Policy (SEPP) 2022 - Sustainable Buildings
- Green Building Council of Australia - Green Star Buildings v1 rating
- National Australian Built Environment Rating System (NABERS) - Energy & Water ratings
- City of Sydney Development Control Plan (DCP) 2012
- City of Sydney Local Environmental Plan (LEP) 2012



2 Strategy

2.1 Overview

This proposed strategy has been developed to respond the aforementioned drivers, positioning the project to support a decarbonising world, as well as providing a healthy space for occupants within the heart of the city.

The project will strive to achieve exemplary sustainability performance, with a focus on energy and water efficiency, indoor environment quality, sustainable transport, and carbon management for whole life net zero ready outcomes.

A three tiered approach is presented below, stepping through the hierarchy to reduce, eliminate, and offset the project's resource use and demand which will be used to guide the design principles detailed on the following pages.



Build using responsible and low embodied products



Deliver energy efficient buildings that reduce the stress on a decarbonising grid



Create a walkable and accessible precinct promoting active and low carbon transport options

Reduce



Take advantage of a decarbonising grid by providing a fully electric development



Deploy on-site active generation and storage systems, where feasible.
Supply all energy uses with renewable electricity

Eliminate



Offset any residual carbon with nature-based solutions

Offset

2.2 Energy Use & Carbon Emissions

A reduced demand for energy consumption will be paramount to meeting the projects sustainability strategy. The development will achieve a decreased energy use and a carbon neutral development through:

- Reducing embodied carbon in design
- Efficient and optimised building systems
- Instigating energy metering, monitoring, and controls to reduce unnecessary energy consumption and allowing energy demands to be better managed across the development
- Any remaining emissions will be offset during operation

The development will be designed to optimise energy efficiency and the use of renewable energy generated on-site as specified by **Clause 7.33** of the City of Sydney LEP by targeting the Energy Use Credit Achievement of the Green Star Buildings rating tool.

2.3 Environmentally Sustainable Design

The project will target a 5 Star Green Star Buildings rating certified by the Green Building Council of Australia.

The outcome will demonstrate 'Australian Excellence' through a holistic approach to environmentally sustainable design in:

- Resource use
- Indoor environmental quality
- Responsible building materials
- Construction management
- Resiliency and adaption
- Sustainable transport

A Green Star Buildings rating will also respond to items required under the **Sustainable Buildings SEPP** for non-residential buildings including the following:

- Minimisation of waste from associated demolition and construction - through the **Responsible Construction and Upfront Carbon Emissions** credits
- Reduction in peak demand for electricity - through the **Energy Use** credit
- Metering and monitoring of energy consumption - through the **Verification and Handover** credit
- Minimisation of the consumption of potable water through the **Water Use** credit.

Assurance

1. Targeting the Green Star Buildings Energy Use Credit Achievement

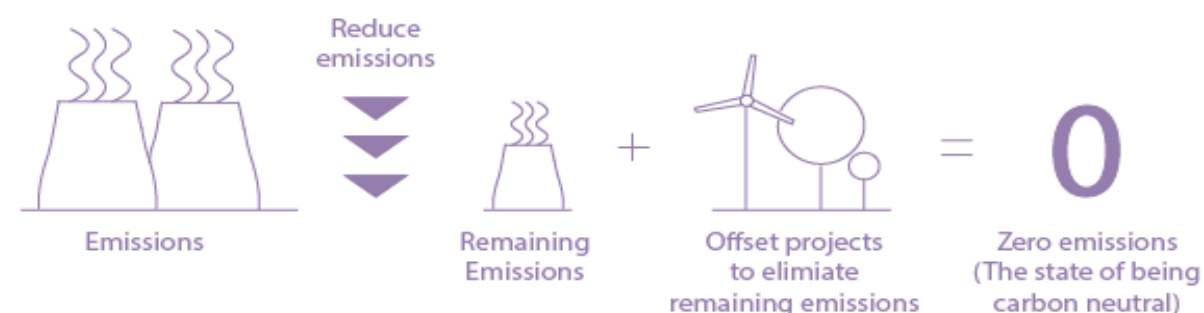
- Demonstrates a 20% reduction in energy use when compared to a reference building

2. Targeting a 5.5 Star NABERS Base Building Energy rating

- Energy performance of the development will be benchmarked throughout design via detailed modelling, identifying opportunities to increase the efficiency and performance of building systems
- Operational energy data will be used to certify the NABERS Energy rating for the development

2. Accounting of embodied carbon emissions

- Required under the **Sustainable Buildings SEPP** for non-residential developments, embodied carbon emissions will be disclosed at the development application and construction certificate stages of the project.



2.4 Water Use

To achieve responsible water consumption and water sensitive urban design required by governing ESD policies and performance requirements, best practice water-saving initiatives will be implemented throughout the project such as:

- Efficient water fixtures and appliances
- Investigation of a rainwater tank and reuse potential such as irrigation or toilet flushing
- Water metering and monitoring, reducing unnecessary demand and providing alerts to any system leaks

Assurance

1. Targeting a 4 Star NABERS Base Building Water rating

- Water usage of the development will be benchmarked throughout design
- Operational water use data will be used to certify the NABERS Water rating for the development

2. Achieving a 5 Star Green Star Buildings rating

- Meeting the Water Use credit Minimum Expectation
- Meeting the Metering and Monitoring criteria of the Verification and handover Minimum Expectation

2.5 Waste Minimisation

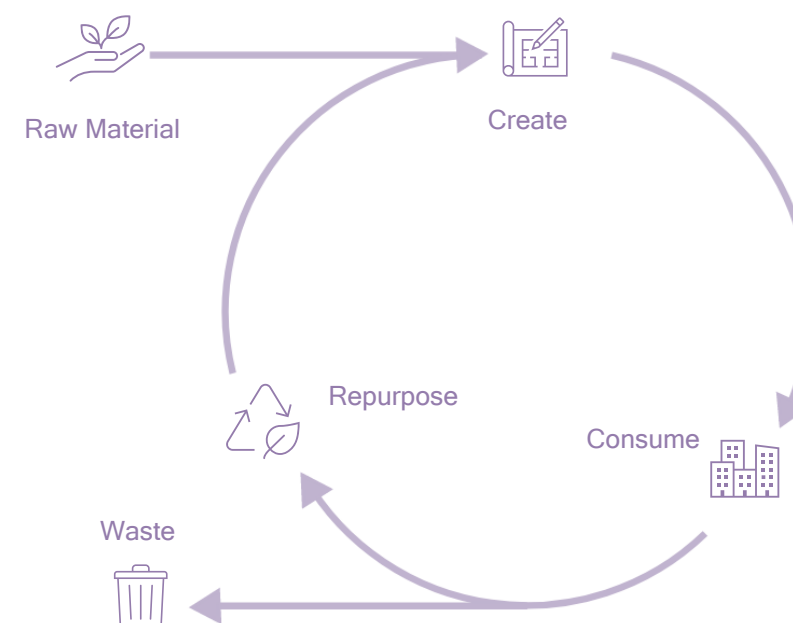
The project will have a significant focus on the whole of life impacts of material use and responsible procurement for both the construction and operational phases of the development. Waste will be kept to a minimum through the following initiatives:

- 90% of Construction and Demolition Waste to be diverted from landfill
- Separation of operational waste streams on-site, allowing for effective recycling and minimising waste sent to landfill

Assurance

1. Achieving a 5 Star Green Star Buildings rating

- Meeting the Responsible Construction Credit Achievement
- Meeting the Responsible Resource Management Minimum Expectation



3 Summary

3.1 Targets

The following table outlines the proposed targets derived from the sustainability strategy for the 580 George Street, Sydney development:

Energy Use & Cabon Emissions	▪ 5.5 Star NABERS Base Building Energy rating ▪ Embodied Carbon Emissions Accounting ▪ Minimum 10% Reduction in Upfront Carbon
Environmentally Sustainable Design	▪ 5 Star Green Star Buildings rating
Water Use	▪ 4 Star NABERS Base Building Water rating ▪ 5 Star Green Star Buildings rating
Waste Minimisation	▪ 90% reduction in construction and demolition waste ▪ 5 Star Green Star Buildings rating

