Meriton

Sydney Olympic Park 100 Bennelong Road- Site 67

Sustainability Strategy

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1 Introduction

Arup have been working alongside Meriton to assess the sustainability opportunities for the 100 Bennelong Parkway residential site (site 67) at Sydney Olympic Park. The intent of this document is to identify a list of commitments for the DA submission and demonstrate a mechanism to ensure that the project delivers on the sustainability requirements established in the SOPA guidelines.

2 Methodology

The report has been set out to respond to the key headings in the SOPA Environmental Guidelines (2008) and the 2030 SOPA Master Plan documents. The report has been set out with the following key headings:

1. Energy Strategy.
2. Water Strategy.
3. Waste Management Strategy.
4. Materials Selection Strategy.

Considerable work has been carried out with the Meriton team to assess options, costs, benefits and risks associated with the development of the sustainability strategy. This initial work is summarised as table of commitments that can be easily monitored throughout the design, construction and operational phases of this project. The table of sustainability commitments summarises the following key information:

- **Commitment intent**: A clear description of the intent of each strategy and the sustainable outcome it will deliver.
- **Key performance indicator (KPI)**: Where appropriate, the commitments will have specific targets that become the initiative KPI.
- **Methodology**: A methodology statement will be provided for each initiative that clearly states the methodology that will be followed to assess the performance and outcomes.

The intent during the next stages of the project is to embed this commitment statement within the Sustainability Management Plan for the project. This will be used to monitor progress of achieving the commitment over the design, construction and operation of the development.

3 Sustainability Commitment

The following table lists the key sustainability initiatives and the commitment being proposed by the development team.

Sustainability Indicator	Intent of Initiative	KPI	Methodology
Energy			
1. Façade Performance	Reduce energy used by air conditioning and improve occupant comfort.	- 20% reduction in minimum BASIX (comfort) performance of glazing.	The average *AccuRate*/*BERS* rating of the apartments will achieve a 20% improvement.
2. Smart Metering	Smart energy metering will be provided for each apartment to indicate to the residence the real time energy consumption and when power tariffs are peak. The intent is to provide the energy information in a way that they can make informed decisions about energy usage.	N/A	A review will be carried out on the latest technology of *smart* energy meters for every apartment selected to provide simple, clear information on energy usage.
3. Renewable Energy	To provide renewable energy by roof mounted PV (solar electric) panels and to offset optimised natural daylighting and efficient lighting in all corridors.	- Offset common area lighting annual energy consumption via onsite PV.	During the design stage assess the annual energy consumption of the common area lighting. The common area will include the lighting in all areas above ground. The assessment will include the benefit of natural daylight in corridors. The proposed PV array will be sized to offset the annual energy consumed by the common area lighting.
4. Common Area Ventilation	To reduce the energy consumption of common areas by promoting natural ventilation to all corridors.	N/A	Review of the natural ventilation of all corridors. ESD consultant to provide marked up architectural drawing indicating how natural ventilation can be optimised.
5. Apartment Ventilation	Improve natural ventilation efficiency in single-sided apartments.	- Air flow assessment using CFD (computational fluid dynamics) software.	A computer air flow assessment will be carried out for a number of typical apartments for different orientations, wind speeds, wind directions and opening sizes.

Sustainability Indicator	Intent of Initiative	KPI	Methodology
Water			
6. Recycled water	Maximise the use of recycled water.	- Connect to WRAMS.	The methodology is to optimise the use of water efficient appliances, then maximise the local recycling of roof rainwater for the irrigation of landscape and then supply the WRAMS water to the non-potable water uses.
7. Water efficient appliances	Reduce potable water consumption.	- Achieve an improvement on the BASIX requirements for 40% water reduction.	Assess water consumption using the BASIX tool and achieve a potable water reduction of greater than 40%.
8. Smart water metering of base building water uses	Understand the annual water usage profile of the buildings base building systems to determine trends or excessive usage of water for different uses.	- Install base building water meters and connect to the BMS system.	A review of annual water usage of base building systems will be carried out based on the BMS logging daily water usage measured by a number of distributed water meters. Water meters will be provided on the WRAMS incoming water supply, the rainwater tanks, the hot water top up, and irrigation supply as a minimum.
Waste			
9. Construction waste	Reduce waste to land fill during construction	- 80% waste diversion from land fill of construction waste.	Specify the 80% waste target in the main contract.
10. Operational waste	Reduce operational waste to land fill during operation and provide monitoring and education around the benefits of waste management for residence. One of the key elements is to be able to gather information on the mass of operational weight generated for each waste stream.	- 70% operational waste reduction target.	The team will consider a couple of options of managing operational waste including: - Working with a private waste operator to develop a robust waste management plan that can be monitored. - Using the Auburn Council waste management service. We will also investigate the latest technologies in using waste monitors on bins to determine how full they are and how this could influence the waste management frequency.

Sustainability Indicator	Intent of Initiative	KPI	Methodology
Materials			
11. PVC reduction	Reduce the usage of PVC.	NA	Assess the quantity of PVC used and the options through reducing the material with replacing with HDPE. A life cycle cost benefit assessment will compare the options of using industry standard PVC, best practice PVC and HDPE.
12. Embodied carbon	Reduce embodied carbon content of construction materials.	NA	Assess the top ten materials used in the development and consider the low embodied carbon alternatives. This will include an assessment of lower cement content concrete and the recycled content of steel.
13. Timber	Eliminate the use of virgin timber material products. If timber is required then FSC sourced timber will be used.	NA	NA

4 Conclusion

Arup have been working alongside Meriton to assess the sustainability opportunities for the 100 Bennelong Parkway residential site (site 67) at Sydney Olympic Park. The intent of this document is to identify a list of commitments for the DA submission and demonstrate a mechanism to ensure that the project delivers on the sustainability requirements established in the SOPA guidelines.

The sustainability commitments that have been established for the project and contained within this report are summarised clearly in a table to demonstrate:

- **Commitment intent**: A clear description of the intent of each strategy and the sustainable outcome it will deliver.
- **Key performance indicator**: A number of the commitments will have specific targets that become the initiative KPI.
- **Methodology**: A methodology statement will be provided for each initiative that clearly states the methodology that will be followed to assess the performance and outcomes.