

Memorandum

| | | | |
|--------------|---|------|--------------|
| To | Alissan Serra | Page | 1 |
| CC | Jenny Watt Ramin Jahromi Shelani Perera Shaun Diamond Peter Jennings Michael Notley Lester Partridge Toby Miller | | |
| Subject | 161 Sussex Street Executive Lounge and Rooftop Bar Statement of Environmental Impacts - Section 96 - Rev00 | | |
| From | Zachary Stein | | |
| File/Ref No. | 60285493/6.1 | Date | 01-June-2015 |

This memorandum presents the Ecologically Sustainable Development (ESD) concepts incorporated into the proposed Executive Lounge and Rooftop Bar to meet the ESD requirements for the 161 Sussex Street development and contribute to the ESD policy targets of the various authorities.

The specific policy targets on which strategies incorporated across the development are based on include:

- Sydney Harbour Foreshore Authority Sustainability Policy Targets
- City of Sydney Draft DCP 2012
 - Section 2.4 ESD
 - Section 2.5 Waste
 - Section 2.6 Water
- City of Sydney's reference to Green Star Ratings
- City of Sydney's reference to NABERS Ratings
- Starwood Groups Global Citizenship Environmental Initiatives.

The strategies incorporated into the broader development meet one or a number of these various policy targets and include:

- Achieving a 4.5 Star NABERS Energy rating for the commercial office component of the development.
- Adopting a number of the general principles of the Green Star Public Buildings (Pilot) rating tool for the hotel without specifically seeking a Green Star rating.

These strategies across the development have been incorporated to demonstrate environmental responsibility by reducing greenhouse gas emissions, potable water consumption and the adoption of good practice environmental initiatives. The following ESD concepts are proposed for the lift lobby modification to align with the development's general incorporation of ESD initiatives, and in doing so meet the above policy targets:

- Ensuring the building fabric is designed to minimise the air conditioning requirements of any air conditioned internal space.

- Where applicable maintaining the current concept of adopting a number of the general principles of the Green Star Public Buildings (Pilot) rating tool for the hotel without specifically seeking a Green Star rating.

1.0 Policy and Targets

This section summarises the policy and target issues highlighted in response to the Development Application.

1.1 Sydney Harbour Foreshore Authority Sustainability Policy Targets

The sustainability targets set by SHFA applies to not only their own operations but also to everyone in the precincts which they have jurisdiction over. The SHFA Green Building User Guide directly assists and incrementally works towards the achievement of the following strategy targets:

- By 2020, SHFA precincts will have a reduced carbon footprint of 80 per cent from a 2000 baseline; with a 20 per cent reduction by 2012.
- By 2020, SHFA precincts will have reduced consumption of potable water of 80 per cent on a 2000 baseline; with a 20 per cent reduction by 2012.
- By 2020, 80 per cent of waste generated precinct-wide will be diverted from landfill for recycling and composting.
- By 2020, 80 per cent of products and materials procured within both SHFA owned operations and precincts will be derived from recycled materials or from other sustainable sources.

Whilst the 161 Sussex Street development project is not required to meet these exact targets, the project will contribute towards SHFA's targets.

1.2 City of Sydney Draft DCP 2012

1.2.1 DCP section 2.4 'ESD' states:

- Council generally encourages all applicants to implement the principles of ESD in the proposed development. Implementing the principles of ESD means that the development will be designed and constructed so that:
 - Greenhouse gas emissions will be reduced.
 - The use of cogeneration and tri-generation systems will be increased.
 - Low carbon and renewable energy use will be increased.
 - Potable water use will be reduced.
 - Development can adapt to climate change.
 - Waste will be reduced.
 - Recycling of waste and use of products from recycled sources will be increased.
 - Indoor environmental quality will be improved.
 - The environmental impact from building materials will be reduced through reduction, reuse and recycling of materials, resources and building components.
 - The biodiversity value of the land will be improved.
- Where an applicant voluntarily proposes achieving a Green Star or other building tool rating Council will apply a condition of development consent that requires the development to obtain the certified rating that was nominated by the applicant.
- Car parking areas should be designed and constructed so that electric vehicle charging points can be installed at a later time.
- Paints and floor coverings with low levels of volatile organic compounds (VOC) and low formaldehyde wood products are to be used where applicable and possible:
 - Use building materials, fittings and finishes where possible that:
 - have been recycled; are made from or incorporate recycled materials; and

- have been certified as sustainable or 'environmentally friendly' by a recognised third party certification scheme.

1.2.2 DCP section 2.5 'Waste' states:

- A waste management plan detailing how waste is to be minimised within a development is to be submitted with the Development Application. The waste management plan will be used to assess and monitor the waste management process within a development. The waste management plan is to be consistent with the City of Sydney Code for Waste Minimisation in New Developments 2005.
- For new buildings and major renovations, the total percentage (by weight) of construction and demolition waste (for example, bricks, concrete, roof tiles) that is reused on site or diverted for reuse or recycling is to be at least 80% with receipts sufficient to demonstrate that the target will be achieved.

1.3 Starwood Groups Global Citizenship Environmental Initiatives

Starwood is committed to doing more to consume less and caring for our planet. Their environmental policy addresses six areas of opportunity, and their initial worldwide focus is on energy & water with a commitment to reducing energy consumption by 30% and water consumption by 20% by the year 2020 (from a 2008 baseline).

These goals are the beginning of an ongoing strategy toward environmental sustainability; Starwood also focuses on guidance for minimizing and reducing waste and emissions, examining their supply chain and enhancing indoor environmental quality.

1.4 Green Star – Public Building (Pilot)

There is no Green Star rating for Hotels as yet. There is however a Public Building Pilot tool.

The 161 Sussex Street development will not be seeking to pursue a Green Star rating as it is acknowledged that there is currently no specific completed tool available suited for a hotel operation. Notwithstanding this, the development will be designed to demonstrate the pursuit of sustainability initiatives based on key strategies outlined in the Green Star Public Building Pilot rating tool. Strategies that will be adopted include:

- Where feasible, there will be the provision of 20% of all aggregate used for structural purposes to be recycled (Class 1 RCA in accordance with HB155-2002) or slag aggregate; and no natural aggregates are used in non-structural uses (e.g. building base course, sub-grade to any car parks and foot paths, backfilling to service trenches, kerb and gutter)
- Recycled Steel will be selected where feasible
- The minimisation of PVC use according to the GBCA PVC Best Practice guidelines where feasible
- FSC or PEFC timber will be selected where feasible over the function areas would provide a demonstrable use of timber within the facility and will be considered further.
- Low VOC paints, sealants, flooring and fit out items will be selected where possible
- Low formaldehyde emission engineered wood products will be selected where possible

2.0 Proposed ESD Strategy

To align with the current development's ESD initiatives it is proposed that the 161 Sussex Street Executive Lounge and Rooftop Bar will incorporate a number of ESD strategies which will demonstrate the development's contribution to meeting the range of Council's and other associated organisation's sustainability policy targets.

The proposed strategy includes:

1.1 Green Star – Public Building (Pilot)

The lift Executive Lounge and Rooftop Bar will consider the following Green Building design criteria where feasible:

- Furniture, assemblies and flooring will have a reduced environmental impact ranging from re-used items, product stewardship program products, latest GBCA recognised product certified assemblies or recycled content assemblies or the supplier has an Environmental Management System
- Low VOC paints, adhesive, sealants, flooring and fit out items will be selected
- Low formaldehyde emission engineered wood products will be selected

Other Green Star initiatives which will be considered include:

1.1.1 Management Items

- Undertake Building Tuning
- Create a Building Users' Guide with information for building occupants, sub-tenants and a Building Maintenance Guide
- Implement of a Waste Management Plan and re-use and/or recycle 80% by mass of all demolition and construction waste

1.2 Energy Efficient Design

Energy efficiency initiatives incorporated into the Executive Lounge and Rooftop Bar design include providing an operable façade to the Rooftop Bar to enable natural ventilation to be used during suitable ambient conditions. The façade also incorporates shading elements to enable the space to operate as a naturally ventilated space more often. The intent of this energy efficiency initiative is to reduce the air conditioning system's energy usage.

Zachary Stein
Mechanical Engineer
zachary.stein@aecom.com

Direct Dial: +61 2 8934 1151
Direct Fax: +61 2 8934 0001