URBNSURF
Sydney

Waste Management Plan

This plan incorporates strategies for managing construction waste and the ongoing management of waste generated by visitors to the proposed surf park. Waste management, as with the other pillars of sustainability are fundamental to community and consumer expectations and not only offers functional and environmental benefits, but is imperative to successful brand positioning in a modern world. In a broad policy framework, this plan assists in the facilitation of the NSW *Waste Avoidance and Resource Recovery Strategy 2003* (the former Department of Environment and Conservation).

Relevant guiding legislation includes:

- *The Waste Avoidance and Resource Recovery Act 2001*
- *Protection of the Environment Operations Act, 1997*
- *Environmental Planning and Assessment Act, 1979*

In a more local scale, in the context of Sydney Olympic Park, this plan seeks to effectively addresses the appropriate segregation, containment and management of waste and has been prepared to meet SOPA's *Environmental Guidelines 2008* Waste Management Objectives:

Waste Management Objectives

Sydney Olympic Park Authority seeks to effectively promote and support increased economic development and precinct visitation while achieving reductions in overall waste production, and increases in waste stream recycling. In pursuit of this objective, wherever possible Sydney Olympic Park Authority is committed to:

(a) Maximising appropriate opportunities to increase the proportion of recycling for waste produced in the public domain including green waste collection, re-use, and composting;

(b) Requiring waste management performance and recycling targets for all developments throughout design, construction and operational activities, with a minimum of 80 percent of construction and demolition waste to be recycled or re-used for each development;

(c) Encouraging public domain concessionaires and service providers to minimise where practical the packaging of foodstuffs for visitor consumption, and otherwise to use non-toxic, recyclable, and biodegradable packaging and materials for their products;

(d) Educating visitors, workers and residents regarding waste minimisation and management issues, and working in cooperation with venues and businesses to minimise waste generation and maximise recycling of materials; and

(e) Maximising appropriate opportunities to improve the sustainability of leachate treatment and disposal methods.

The objectives of the SOPA *Environmental Guidelines 2008* (and other guiding documents detailed above) will be achieved through the development of:

1. Construction Environmental Management Plan (for construction related activities) and an
2. Operational Management Plan (for operational related activities).

Specifically, the Construction Environment Management Plan will require:

- minimise construction waste – from design through to delivery;
- maximise recycled and recyclable content of construction materials;
- maximise re-use of and recycling of construction material; and
- select construction materials with minimal environmental impact where appropriate.

These objectives can and have in part been achieved by:

- implementing the management plan through design and building stages;
- detailing a minimal earthworks strategy. The preliminary earthworks model currently anticipates the cut and fill of approximately 14,000 cubic metres of material with zero waste to be sent off site. All existing material, including bitumen, curbing, spoil and any potentially impacted material is proposed to be retained onsite. Areas of potential asbestos impact and existing clay capped containment cells have been characterised and delineated. The clay capped containment cell to the south of the proposal building line will not be impacted and areas of potential asbestos contaminating material have been designed to be left in-situ, where possible. Any material confirmed of impact, is proposed to be contained and long-term managed on site (refer to Construction Environmental Management Plan prepared by Insite).
- Require the head contractors to create dedicated storage areas for the separation and collection of recyclable and compostable waste (as a condition of contract);
- encouraging contractors to have valid ISO 14001 Environmental Management System (EMS) accreditation;
- maximising the re-using/ recycling/ composting of all demolition and construction waste where possible.

The Operational Management Plan will specifically require:

- ensure waste systems are easy to use and that collection vehicles are able to access storage areas to remove waste safely and easily;
- ensure safe practices for storage, handling and collection of waste & recycling are implemented;
- measures to minimise operational waste to landfill;
- minimise the use of chemicals and/or any hazardous materials for water treatment and cleaning;
- maximise local or on-site recovery and re-use of waste streams;
- maximise recycled and recyclable content of all operational equipment and product;
- maximise recycling of materials;

- ensure health and amenity for visitors and staff is maintained;
- ensure practices and controls are implemented to ensure adequate pollution prevention to adjacent environmental receptors;
- practice continuous improvement and promote environmental awareness and education through operations.

These objectives can be achieved by:

- implementing an 'avoid, reduce, re-use, recycle' approach to waste management in all operational processes (in all aspects of the business including the food & beverage offering);
- Designing a water treatment system that requires minimal backwashing of filters and discharge to sewer;
- Designing a water treatment system that provides efficient and necessary disinfection with minimal use of noxious chemicals;
- Negotiating minimal and/or recycled packaging of procured materials, food products merchandise with manufacturers as far as practical and appropriate;
- providing appropriate recycling facilities for visitors and staff;
- ensuring office space operations minimise waste generation;
- development of a short-order menu that suits the recycling of disposable food materials (such as cutlery, plates and cups) where practical;
- requiring contracted food providers to comply with URBNSURF Sydney's waste management plan including the use of on-site recycling facilities.

Operational Waste Generation Calculation

A summary of the forecast daily waste generation allowances for optimal onsite operations, based on allocated floor spaces and differing activities and amenities is provided below.

WASTE MANAGEMENT CALCULATION

RESTAURANT WASTE	10L / 1.5m² floor area / day
RESTAURANT RECYCLING	2L / 1.5m² floor area / day
LICENSED CLUB (BAR) WASTE	50L / 100m² / bar area / day
LICENSED CLUB (BAR) RECYCLING	50L / 100m² / bar area / day
OFFICES WASTE	10L / 1.5m² floor area / day
OFFICES RECYCLING	10L / 1.5m² floor area / day
RETAIL < 100m² WASTE	50L / 1.5m² floor area / day
RETAIL > 100m² WASTE	50L / 1.5m² floor area / day
RETAIL < 100m² RECYCLING	25L / 1.5m² floor area / day
RETAIL > 100m² RECYCLING	50L / 1.5m² floor area / day

Waste Management calcs / day	WASTE	RECYCLING
CAFE (60m²)	400	80
MERCHANDISE (180m²)	3600	3600
BAR (105m²)	52.5	52.5
ALFRESCO (400m²)	2666	533
TOTAL (L)	3118	665
TOTAL BINS (240L)	13	3
TOTAL BINS (360L)	9	2

Functional Design

Given the forecast waste generation volumes, appropriately sized bins stores have been designed in accessible and strategically positioned locations around the site.

With reference to the Site Plan on **ATTACHMENT 1**:

1. A 240L general waste and recycling bin will be housed and located on the Entry Plaza (to be further detailed in the landscaping detailed design). This will be checked and emptied daily.
2. Housed 240L general waste and recycling bins will be placed in the public realm for convenient disposal of waste by visitors (particularly in proximity to food & beverage). For further specification during landscaping detailed design. These bins will be checked and emptied by operations staff. An intraday storage location is strategically positioned adjacent to the main kitchen. The waste store is to be built out of suitable impervious materials meet best practice hygiene, ventilation and functionality criteria. The first-floor food & beverage offering has been designed to accommodate intraday bins for both general waste and recyclables and is serviced by a lift and a dumb waiter.
3. 240L bins will be removed from intra-day storages, via a secure gate and wheeled approximately 80m north at a slight downward incline (~2%) and access the main service yard, via a secure gate (see **ATTACHMENT 2**) to the main bin store. This path will be free of steps and kerbs. Additionally, this area can be access by a service lift adjacent to the surf academy.

4. A designated bin store will provide for the bare minimum daily (13x 240L) general waste and (3x 240L) recyclable bins with additional space provided for box crushing, 1,000L bins for cardboard and other recyclable items (i.e. kegs and pallets).
5. Given the size of the site, an event specific enclosed bin store has been allowed for in the south-east corner of the site, accessible by both the main carpark entry and a service access point.

Waste Truck Vehicle Access

With reference to **ATTACHMENT 2**, waste removal trucks have unhindered access to the site via Hill Road onto Holker Busway (with no restrictions to clearance). Accessibility by waste removal trucks has been designed for in the architectural drawings and assessed in the supporting Traffic Impact Assessment (TTPP). Note that turning circle and swept path diagrams are provided within. Trucks can enter and leave the service yard in a forward direction (refer to the TTPP Traffic Impact Assessment). This central bin store is collocated with other back of house operations and is not visible to visitors. Appropriate signage will provide waste contractors adequate wayfinding to the central bin store upon arrival.

Liquid waste from a proposed grease trap within the kitchen will be accessed via the secure gate adjacent to the intraday bin store. Removal of liquid waste will be undertaken by a contractor preapproved by Sydney Water and Office of Environment & Heritage. Liquid waste generated by back wash of filters in the water treatment plant will be disposed of directly to sewer (and are best in class in terms of minimise volumes produced).

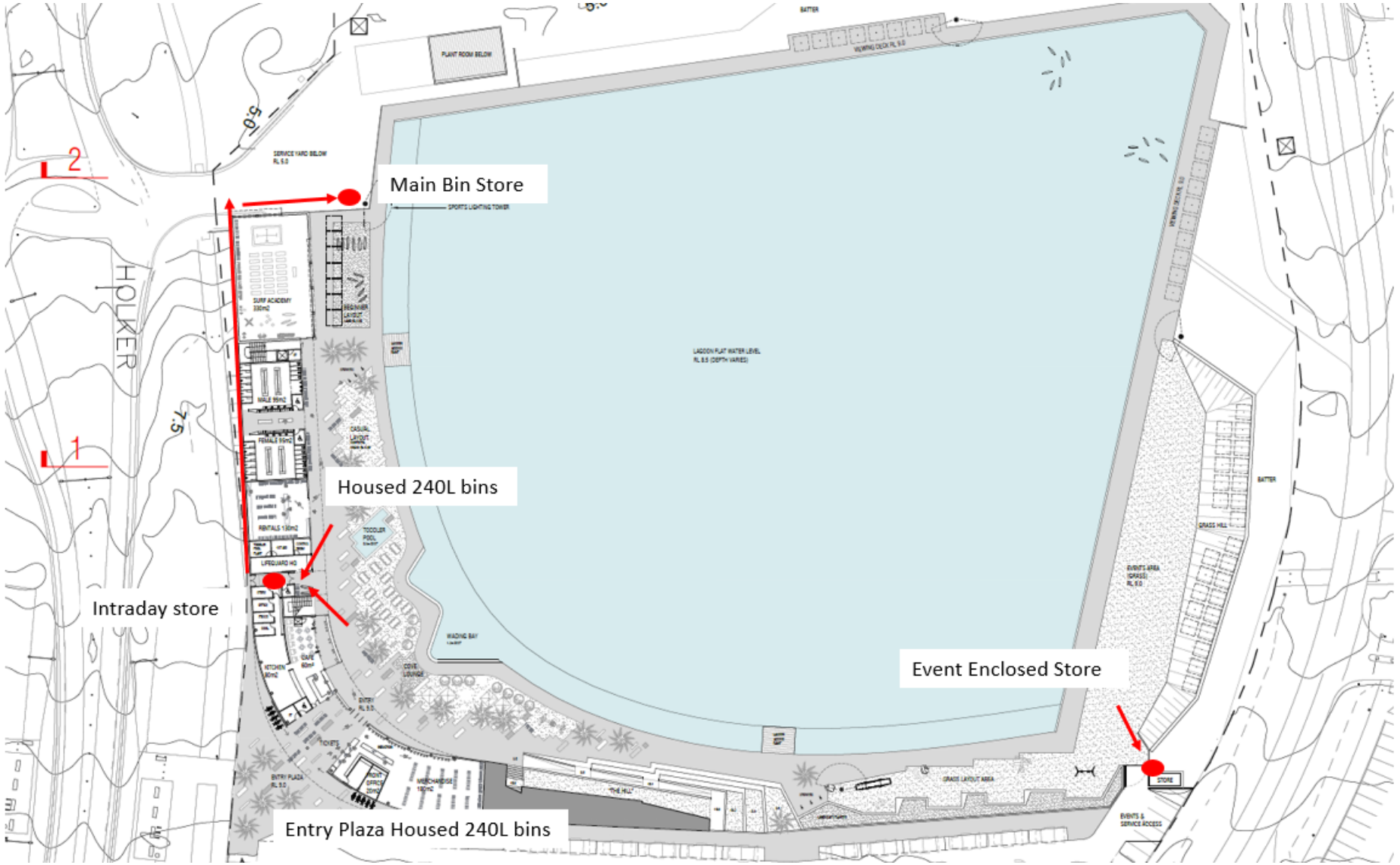
Ongoing Responsibility

Onsite management of waste is the responsibility of the site operator. Removal of waste and recyclables will be undertaken by a private contractor, engaged as required to ensure sufficient operational capacity is maintained, as is amenity and hygiene (as required by SOPA).

Conclusion

This Waste Management Plan provides for a framework, context of the location, construction and operational objectives, forecasts the waste generation quantities, describes the functional design aspects of the proposal, vehicular access and responsibilities for management. Forthcoming Construction and Operational Management Plans will further detail how the set objectives will be met.

ATTACHMENT 1 – Waste Collection Facility Site Plan



ATTACHMENT 2 – Vehicle Access for Waste Collection (refer to Traffic Impact Assessment, TTPP)