Intercontinental Sydney

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Waste Management Plan

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1.Introduction

This Waste Management Plan (WMP) has been prepared on behalf of Mulpha Australia Ltd to accompany a Development Application for the Intercontinental Sydney (ICS). This Plan has been developed with consideration of City of Sydney Councils requirements.

The following has been based on the information provided and is intended to inform the design of the waste services by identifying the estimated waste profile for the development and providing the total area required by the recommended equipment/systems.

Reference to the Council of the City of Sydney's, Policy for waste minimization in new developments has been referred to in the development of the waste estimates and related management requirements.

The project includes the construction of additional hotel premises. In relation to this waste management plan, the key components of the new development are:

- Ballroom
- Function room with cocktail lounge
- Day spa rooms

Waste audit and management strategies are recommended for new developments to provide support for the building design and promote strong sustainability outcomes for the building. All recommended waste management plans will comply with council codes and any statutory requirements. The waste management plan has three keyobjectives:

i. *Ensure waste is managed to reduce the amount of waste and recyclables to land fill* by assisting the building occupants to segregate appropriate materials that can be recycled, displaying signage to remind and encourage recycling practices and through placement of recycling and waste bins in appropriate locations to reinforce thesemessages.

ii. *Recover, reuse and recycle* generated waste wherever possible.

iii. *Compliance* with all relevant codes and policies.

To assist in providing clean and well-segregated waste material, it is essential that this waste management plan is integral to the overall management of the building and clearly communicated to all staff (and patrons) of the ICS.

2. Waste Generation

2.1 Waste Streams

Based on the proposed development, the following waste streams would be expected in addition to the existing waste profile:

- General waste;
- Comingled recycling
- Food organics recycling;
- Cardboard/paper recycling and;
- Glass recycling.

Other wastes may be generated, but these would be in small volumes and irregular in terms of when generated.

2.2 Waste Generation Estimates

Based on averages for quantity of waste generated and composition as determined by industry data (ie., data/information provided by WACS' waste audits conducted in a broad range of sectors) as well as consideration of the waste generation rates as detailed in the NSW Office of Environment and Heritage, Model Waste Not - Development Control Plan 2008 and the City of Sydney "*Policy for Waste Minimisation in New Developments, 2005*". It is estimated that the proposed areas for development will generate a total of **10,920** of waste and recyclables per week (this total includes proposed new developments areas only).

The following table shows the estimated waste generated from the development.

Table 1 – Waste generation estimate per week

	L/week
General Waste	5,500
Commingled	800
Food Organics	720
Cardboard/paper	1,980
Glass	1,920
Total	**10,920**

Notes:

- Calculations are based on the proposed development as advised.
- Calculations are based on catering to maximum capacity.
- The volumes are based on correct segregation of general waste, cardboard/paper, organics and glass.

3. Waste Management Systems

3.1 Waste streams

It is proposed that the figures calculated in table 1 will be integrated into the current waste management system. It is expected that the function room and ballroom will be used on average 3 times per week. Maximum capacity of the ballroom is proposed to be an 800 person sit down meal. Calculations are based on these variables.

General waste: General waste will be managed by the existing compactor. General waste will be managed by ICS staff and caterers during functions. It is anticipated that 5 x 1100L MGBs (or 240L MGB equivalent) will be required to clear waste from the proposed areas. An extra pick up of the compactor may be required to account for the additional waste produced during function times.

Comingled: Comingled recycling is collected by staff during function times. ICS staff and caterers will be responsible for collecting comingled waste with general waste. Commingled waste will be processed along with general waste and taken to the general waste compactor for processing.

Organics waste: Organics waste produced in the kitchen during food production for functions will be stored in the wet garbage fridge along with existing food waste. It is estimated that an extra 6 x 120L bins will be required to clear extra waste produced during functions. Waste food organics will be managed by chefs and kitchen staff and bins transferred to storage fridge for pick up as required.

Cardboard: Cardboard waste will be generated during function times as a result of increased food preparation and alcohol consumption. I.e.: beer cartons, wine boxes and boxed food supplies. ICS staff and caterers will be responsible for collecting the cardboard in bins and taking them to the storage area for baling then later collection.

Paper: Paper waste is mainly generated by old newspapers that have been read and discarded by hotel patrons. It is anticipated that this will remain the same with little paper waste increase as a result of the function and ballrooms. ICS staff will manage paper waste as per current waste management system.

Glass bottles: Glass bottle waste that is produced during function times will be stored in the existing bin storage room. It is estimated that another 6x240L bins will be needed to clear the waste from the proposed new areas once in use.

Note: Waste cooking oil volumes will increase during function times and will be managed as per current management system and pick up frequencies varied if needed.

3.2 Management systems

The following summarises the recommended waste and recycling systems that will be implemented. These recommendations are based on City of Sydney's Council requirements and systems implemented for similar developments.

All ICS staff (and contractors), will be briefed on the proper use of waste management system and the recycling streams will be monitored and reported by cleaners/building management as it is imperative that the recycling stream remain free of contamination to ensure compliance with City of Sydney Council and the appointed waste service contractor collection protocols. Staff will be encouraged to maximise the separation of general waste and recyclables to aid the proper disposal of all materials.

Waste and recycling collection services will be provided by an appointed contractor. Utilising an appointed contractor affords ICS greater flexibility regarding collection schedules and the appropriate collection frequencies will be determined in consultation with the waste contractor once appointed – however once operational, collection schedules may need to be adjusted accordingly depending on actual waste generation.

Signage will be a crucial element of the waste management system. Appendix B contains examples of signage. These are the type of signs that should be used throughout the hotel and waste storage area.

The following summarizes the recommended systems required to manage the estimated waste profile as detailed in the above table for the proposed development. The systems refer to both a dock/basement system rather and internal bins that may be used within the development.

3.3 Disposal of Wastes/Recyclables

The following summarises the disposal pathway for the wastes and recyclables generated once the hotel is operational following the development.

Table 3 – Waste Management Systems

Type of material	Destination
General waste (including commingled)	Transported to a landfill for disposal by the appointed contractor
Organics Recycling	Transported to an organics processing facility for processing by the appointed
Paper/Cardboard	Transported to a recycling facility for recycling by the appointed contractor
Glass bottles	Transported to a recycling facility for recycling by the appointed contractor

3.4 Summary of management process

The following summarises the management system for the wastes and recyclables for the ICS. All wastes and recyclables that are collected from the kitchens, restaurants, bars and function rooms will be transported to the waste storage room by ICS staff via the lift.

Table 4 – Waste systems

Stream	System	Comment
General Waste (including commingled)	Compactor	Staff separate general waste to deposit directly into 240L MGB. Hotel staff or caterers to transfer general waste MGB's from the points of generation to the waste compactor area.
Organics	120L MGB's	Staff separate food waste materials in BOH/kitchen areas to deposit directly into 120L MGBS
Paper/Cardboard recycling	Cardboard Baler/240L MGB's	ICS Staff to transfer cardboard/paper from the points of generation to the waste storage area. Cardboard baled for later collection. Paper stored in 240L MGB's for collection
Glass bottles	240L MGB's	Staff to deposit glass bottles directly into 240L MGB's. Hotel staff or Cleaners to transfer 240L glass bins from the points of generation to the waste storage area for collection.

3.5 Organics

ICS has the option of using a private contractor to collect organics waste (as per current management) or using the Pulpmaster system. However, it is important that ICS management liaise directly with Pulpmaster to ensure that management requirements and costs are clearly communicated and understood

Below is a brief description of the Pulpmaster system:

> *The Pulpmaster 5000 machines are located in the highest food waste generation points, it should maximise the food waste capture at the lowest possible rental cost. The kitchen/catering staff could transfer smaller amounts of food waste to the Pulpmaster 5000 using the 23L Pulpmaster caddy bins. The Pulpmaster 5000 machine can process 70 litres (3 x Caddy Bins) in approximately 45 seconds. The pulped food waste would be pumped from the Pulpmaster 5000 machine into the Pulpmaster 2700L Tank that could be located in a Waste Room or Dock Area. This saves devoting labour to carrying bagged waste to the general waste bins.* ***Please note: We estimate that disposing of 1 tonne of food waste into plastic bag lined kitchen bins would require transporting 40 to 50 bags to a front lift bin.***
>
> *Pulpmaster Training would be carried out by Pulpmaster initially to ensure that the kitchen/catering staff capture and separate their organic waste. It is crucial that a Site Champion would need to be trained by Pulpmaster to ensure that the separation of the organic waste continues to happen, and that contamination does not make its way into the Pulpmaster 5000 batch machine.*

3.6 Bin Requirements

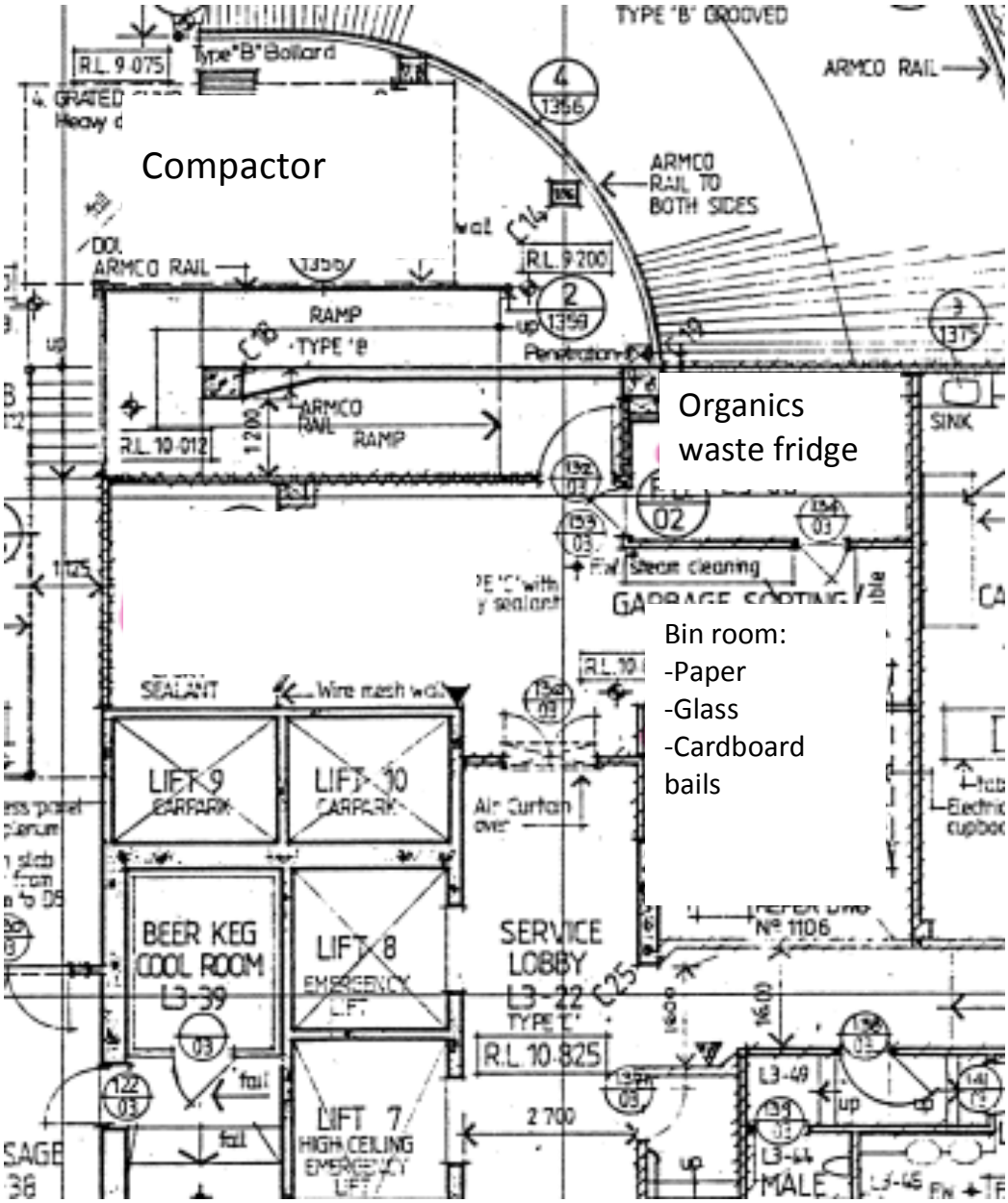
Containers located within the development for waste and recycling should be consistent. The following table outlines the colour coding that has been developed by Standards Australia.

Table 8: Standards Australia waste/recycling container colour coding

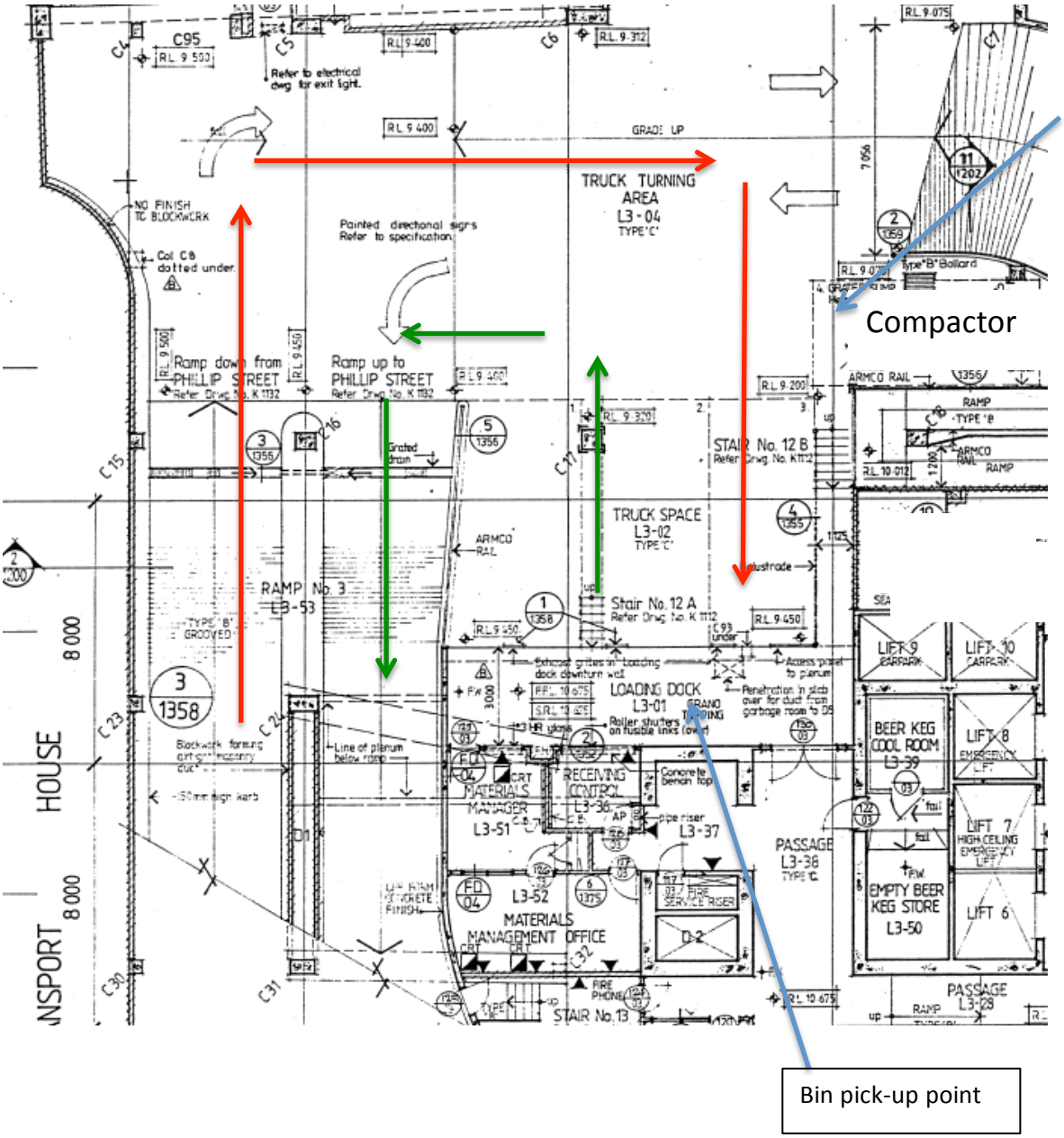
Waste Stream	Bin Body Colour	Lid Colour
Paper Recycling	Blue	Blue
Cardboard Recycling	Green	Blue
Food Organics	Burgundy	Burgundy
General Waste	Green	Red

3.7 Waste Storage

The following diagram illustrates the location of the waste storage areas.



3.8 Truck Access



5.Education

All relevant staff will receive information regarding the waste collection systems including how to use the system, which items are appropriate for each stream and collection regimes. Appropriate signage and updated information will also be provided.

All waste receptacles will be appropriately signed and additional room signage is usually provided from most waste contractors during implementation of the waste contract. Examples of signage sn included in Appendix B.

It is recommended that all signs should;

- Clearly identify the waste/recycling stream;
- Use correct waste/recycling stream colour coding;
- Identify what can and cannot be disposed of in the receptacle; and
- Include highly visual elements to accommodate for individuals with inadequate English literacy.
- As part of the staff induction process, a waste and recycling toolkit will be provided. This toolkit will include the details of each of the systems in place; acceptance criteria for each stream and how each stream is managed.

On a monthly basis waste and recycling performance reports will be reported back to staff so that they are aware of their performance and areas for improvement. An active waste monitoring program will be employed. The waste and cleaning contracts will ensure that contractors actively participate in the waste reduction program for the site and meet monthly to identify performance and new opportunities for diversion and avoidance.

6. Ongoing Management

Having suitable systems in place is only one element of an effective waste management system. Compliance by all stakeholders is essential.

Staff and Cleaners are a key element in the effectiveness of the systems in place. Prior to acceptance of the cleaning contract, the contractor will be required to demonstrate how the management of waste and recycling will be carried out so as to ensure that segregated materials are placed in the correct systems. This process will be agreed and a training program implemented by the cleaning contractor to ensure full understanding by all cleaners. Monitoring of the system will be carried out by the cleaning supervisor and site management throughout the term of the contract.

In addition, cleaners will be required to feed back to site management any non-compliance issues they observe during their cleaning activities. This may include contamination of recycling; non-participation in the recycling system, or missing or damaged bins. In this way issues can be promptly dealt with by management.

Waste and recycling contractors will be required to report actual volumes collected by stream so that site management can monitor performance and feed this back to stakeholders.

It is highly recommended that a basic reporting program be set up at the site which would include bin tally sheets that detail the number of bins collected and how full they are at the time of collection, in addition to communication procedures to allow waste contractors to provide feedback regarding contamination and leakage.

All staff should be educated and made aware of any changes to the existing waste systems.

7. Waste Management Reporting

It is recommended that there will be reporting on waste management systems in terms of (as examples):

- Total quantities of wastes/recyclables generated
- Total amount of materials diverted from landfill (per stream)
- Waste avoidance/reduction opportunities implemented
- Issues associated with the current waste management system.

Data and information required for this reporting will be obtained from cleaning and waste service contractors as part of their contractual obligations.

The following waste hierarchy will be used as a guiding principle for the operation of the ICS, purchasing and management of all waste materials generated:

1.1.1 Avoid and Reduce

Minimise the production of waste materials by:

- Assessing and taking into consideration the resultant waste from different options
- Purchasing materials that will result in less waste, which have minimal packaging, are pre-cut or fabricated.
- Not over ordering products and materials

1.1.2 Reuse

Ensure that wherever possible, materials are reused either on site or offsite:

- Identify all waste products that can be reused
- Put systems in place to separate and store reusable items
- Identify the potential applications for reuse both onsite and offsite and facilitate reuse

1.1.3 Recycling

Identify all recyclable waste products to be produced on site:

- Provide systems for separating and stockpiling of recyclables
- Provide clear signage to ensure recyclable materials are separated
- Process the material for recycling either onsite or offsite

1.1.4 Disposal

Waste products which cannot be reused or recycled will be removed and disposed of. The following will need to be considered:

- Ensure the chosen waste disposal contractor complies with requirements
- Implement regular collection of bins

Appendix A – Waste Management Equipment

The following diagrams illustrate colours and sizes of different bins that could be used within the development.

Figure 1 – MGB bin

Figure 2 – MGB bin

Figure 3 – Indicative size of MGB

Figures 5 and 6 – Cardboard balers

ELEPHANTS® FOOT recycling solutions

EF 100VX

The EF100VX is a low height baler making it easy to transport and install with no on site assembly required. It is a low noise baler with a fast cycle time and front loading ropes. EF100VX baler produces bales of cardboard up to 90kg. It can be used to bale a range of materials including plastic film, shredded paper and cardboard.

Figure 7 – Oil collection unit

Tenants drain oil from the fryer into the Oil Kaddy transporter then wheel the transporter to the main oil unit in the dock, connect the hose and run the cycle – thus avoiding the need for lifting oil containers and reducing the chance of spills and slips

Appendix B – Example Signage