Aurecon Australia Pty Ltd ABN 54 005 139 873 116 Military Road Neutral Bay New South Wales 2089 Australia

Telephone: +61 2 9465 5599 Facsimile: +61 2 9465 5598

Email: sydney@ap.aurecongroup.com

www.aurecongroup.com

Waste Management Report for Development Application 88 Walker Street & 77-81 Berry Street Eastmark Holdings

19 March 2009 Reference 29239/3.8 Revision A



#### aurecon **Document Control** Document ID: S:\29239\ENG\ESD\WASTE REPORT\REPORT\WASTE MANAGEMENT REPORT REV A.DOC Rev No Date **Revision Details** Typist Author Verifier Approver 01 09 Mar 2009 Draft Issue For Comment AJ AJ Α 19 Mar 2009 Final Issue for Development Application AJ AJ BK BMD

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#### 1. Executive Summary

This report outlines the minimum waste management strategies for the proposed mixed use development at 88 Walker Street & 77-81 Berry Street, North Sydney. The document has been prepared in reference to North Sydney Development Control Plan (DCP), City of Sydney Policy for Waste Minimisation in new developments and relevant Australian Codes and Standards.

The purpose of this document is to define the waste management strategies for the operational phase of the development. The construction phase of the development has been discussed in brief in Section 3.1 of this report.

The following outlines the minimum design requirements for the operational waste management strategy for the development:

- Sufficient space is allocated for the number of bins, Councils and waste contractor access and movements
- Appropriate signage is to be posted outside storage rooms, refer details provided herein report
- Designation of facilities within convenient basement locations for drop-off and collection of wastes
- Construction is to be reinforced concrete flooring (with grading to sewer) with fire rated wall and ceilings to BCA requirements with grading
- Provision of cold and hot water supply is to be provided to all waste storage facilities
- Regular maintenance (minimum 3 months) is to be facilitated to maintain hygiene
- Enclosed waste facilities are to be ventilated by artificial means complying with AS 1668
- Sufficient artificial lighting controlled by motion detectors both outside and inside rooms in accordance with AS 1680
- Chutes are to discharge into storage containers or compactor units within the Hotel and are appropriately maintained by staff

We have estimated that the following waste volumes and capacities are to be generated from each proposed building on the site:

Building	Description	Volumes waste	produced (per day)	Din Typos
Building	Description	General Waste	Recycled Waste	Bin Types
Commercial	Commercial, Retail and Hospitality Facilities	8,007L	6,079L	240L / 1000L
Hotel	Hotel and Hospitality Facilities	5,141L	1,029L	240L / 1000L

Refer to tables 2 and 3 for proposed waste storage facilities and collection times.



#### 2. Introduction

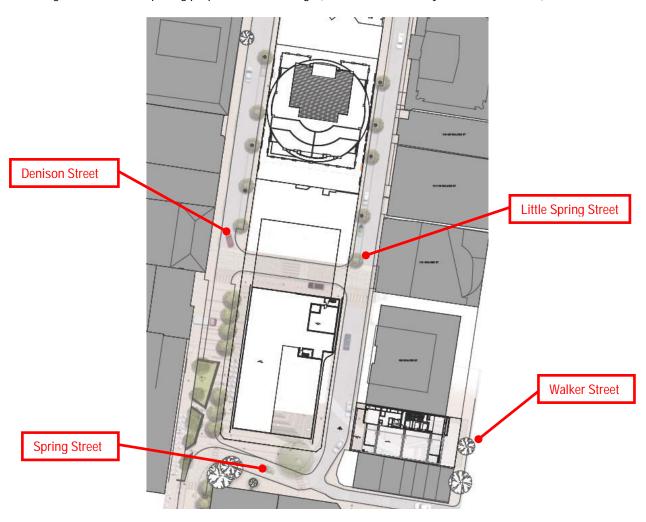
This Waste Management Report has been prepared for the proposed mixed use development to 88 Walker Street & 77-81 Berry Street, North Sydney on behalf of Eastmark Holdings. The document outlines the proposed operational strategy, waste handling capacities of each of the proposed uses and defines minimum building standards that are applicable to the waste facilities. The report forms part of the planning submission to The State and demonstrates compliance with relevant consent authority provisions and Australian Codes and Standards for on-site waste management.

The City of Sydney Policy for Waste Minimisation in new developments has been referenced where applicable to the commercial development. The policy is based of the Department of Environment and Climate Change's NSW Waste Avoidance and Resource Recovery Strategy 2003 which provides a framework for reducing wastes, establishing targets and an action plan for managing waste generation endorsed by the NSW government.

#### 2.1 Site description

The development is located in the North Sydney CBD comprising two sites connected via an air-bridge and tunnel. The Hotel site is bound by Walker Street to the East and Little Spring Street to the west. The commercial building is bound by Spring Street to the South, Little Spring Street to the East, and Denison Street to the West. Both sites are occupied by existing buildings and the site is located within the North Sydney Council municipality.

Figure 1:Site Plan depicting proposed new buildings (Source: Rice Daubney Architectural Plans)





#### 2.2 Project description

The proposed development is to re-develop two existing sites into a viable mixed use development of commercial office, retail, hotel and hospitality with adequate provision for carparking. The proposed development consists of:

- One (1 off) commercial office building with retail and hospitality facilities. The building is to be a
  thirty five storey Commercial Office building with thirty one levels of office space, two levels of
  retail, and four levels of basement carparking.
- One (1 off) hotel building twenty seven storeys high with two levels of basement dedicated to hotel operations and storage.

The office and hotel buildings share carparking facilities and are linked via an air-bridge and tunnel.

Figure 2: Floor Plan depicting commercial office and hotel towers linked via air-bridge

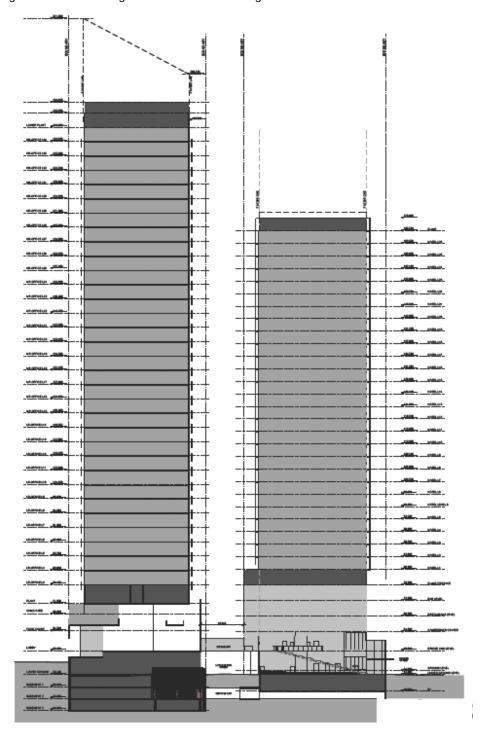




The works associated with the development include:

- Demolition of existing site buildings
- Strategic hard and sort landscaping
- Civil earthworks for excavation of new carparking facilities
- Construction of one commercial tower building and one hotel tower building.
- Construction of associated of site accessways, footpaths to buildings, carparking and recreational facilities
- Construction of new air-bridge and tunnel linking the two sites

Figure 3: Section through hotel and tower buildings





#### 2.3 Locality & Legislation

The development is subject to local statutory requirements imposed by North Sydney Council, State legislation imposed by the NSW Government and Australian Building codes and Standards. North Sydney Council's Development Control Plan (DCP) defines the minimum waste management provisions that are to be considered for commercial building classes. Planning policies and legislation that is applicable to the development include:

- North Sydney Council Local Environmental Plan (NSLEP), 2001
- North Sydney Council Local Environmental Plan, 2001 amendment No. 28
- North Sydney Local Environmental Plan, (NSLEP89) 1989
- North Sydney Council Development Control Plan (NSDCP), 2002
- Environmental Planning & Assessment Act, 1979
- Environmental Planning & Assessment Regulation, 2000
- The Waste Avoidance and Resource Recovery Act, 2001
- Protection of the Environment Operations Act, 1997
- The Food Act, 2003 incorporating The Food Regulations 2004

For the purpose of this report the following sections of the North Sydney Council DCP have been referenced:

- Section 6 Mixed Use Developments
- Section 19 Waste Management
- Section 20 Commercial Development;
- Section 20.4 Quality Urban Environment Garbage Storage
- Section 20.5 Efficient use and Management of Resources Waste Management in Building Design & Waste Minimisation
- Section 20.7 Hotels

In addition to the North Sydney DCP the following have been referenced:

- North Sydney Council Waste Handling Facility Guide
- North Sydney Council Waste Management Plan Form
- North Sydney Council 'Garbage Bays' pamphlet
- The City of Sydney Council Policy of Waste Minimisation in New Developments



#### 3. Waste Management Strategy

The following waste management strategy has been developed for the operational phase of the development. The following section identifies the different volumes of waste and recyclable materials that are expected to be generated for the proposed uses and identifies the management strategies to deal with the generated waste.

Building operations are to be managed to reduce the environmental impacts of waste generation for the development. Guiding principles to be adopted for site waste management include:

- Avoid production of wastes
- Reduce volumes of waste produced
- Reuse materials and equipment
- Recycle/reclaim waste where possible
- Investigate potential for composting of biodegradable wastes
- Maintain health and wellbeing of occupants
- Discharge wastes in accordance with statutory requirements
- Set targets for future waste productions and set benchmarks to reduce waste production
- Reduce potential for littering and dumping
- Reduce wastes that contain toxic substances through appropriate materials selection

The development is committed to the Department of Environment and Conservation's NSW Waste Avoidance and Resource Recovery Strategy 2007 which highlights strategies for meeting the above targets.

The following identifies the minimum waste management strategy proposed for each of the project stages.

#### 3.1 Waste Management during Demolition and Construction

All opportunities to re-use materials from the demolition and excavation phase are to be investigated for the project. The opportunities for reuse and recycling of demolition materials are limited to materials that are deemed non-hazardous.

The estimated construction waste volumes for the development are detailed in Appendix A Table 5. These figures will need to be confirmed by the building contractor on the detailed preparation of a Waste Management Plan for the construction phase of the project. This WMP is to form part of the Environmental Management Plan (EMP) for the site and is to include (but not be limited to):

- Documentation of the proposed waste management strategies for the construction stages from excavation through to commissioning.
- Provision for on-site materials sorting and collection area. Materials to be sort include timber, blocks, bricks, glass, metals, insulation, pallets, cardboard concrete & associated construction materials.
- Provision for on-site monitoring of wastes generated with details of weights (quantities) for each material, disposal destinations (tracking) and receipts.
- Identification of materials that pose environmental risk to be used on site
- Define the appropriate waste disposal measures to be undertaken for materials that pose an environmental risk such as soils, concrete, contaminated water, paints etc

Should recyclable materials be identified they should be appropriately stored from weather damage, dust and general damage.



The Construction Phase Waste Management Plan (CWMP) is to be developed prior to the demolition of the remaining buildings for both sites and will outline the opportunities for reuse and recycling of these materials. The CWMP will also identify the extent of materials to be sorted and diverted from landfill for all construction wastes.

#### 3.2 Waste management during Operation

#### 3.2.1 Storage capacities

The proposed development has been assessed in accordance with North Sydney Council DCP Part 19 and all relevant documents referenced within the NSDCP. The extent of storage facilities required to service the development has been provided in Table 1. The calculations were completed in accordance with typical waste volumes as listed in the Waste Handling Facility Guide produced by North Sydney Council and the City of Sydney Policy for Waste Minimisation in New Developments, Appendix B: Waste and recycling generation rates for residential and commercial premises.

Table 1: Volume of wastes generated daily for both buildings in the proposed development

Duilding	Deceriation	Volumes waste pr	roduced (per day)
Building	Description	General Waste	Recycled Waste
Commercial	Commercial, Retail and Hospitality Facilities	8,007L	6,079L
Hotel	Hotel and Hospitality Facilities	5,141L	1,029L

For the purpose of this assessment it has been assumed that collection is twice a week for recycled wastes and five days a week for general wastes and food scraps, in accordance with North Sydney Council DCP Section 19 recommendations.

Table 2: Number of bins required & proposed service to the Commercial Tower

Stream	Use	Number of bins	Size of bins	Collection Frequency
	Office	4 12	1000L 240L	Five times a
General waste	Retail	2	1000L	week
Commingled	Office	14 8	240L 240L	
Recycling Bins (glass, aluminium)	Retail	14	240L	Twice a week
Organic Recycling	ALL	6	240L	Twice a week
Paper Recycling	Office	55	240L	Three times a
i aper inecycling	Retail	10	240L	week



Table 3: Number of bins required & proposed service to the Hotel Tower

Stream	Use	Number of bins	Size of bins	Collection Frequency
General waste	Hotel	2	1000L	
		4	240L	
	Restaurant	2	1000L	Six times a week
	Bar	4	240L	
	Conference / Lobby	2	240L	
Commingled	Hotel	2	240L	
Recycling Bins	Restaurant	1	1000L	Three times a
(glass, aluminium)	Bar	1	1000L	week
	Conference / Lobby	1	240L	
Paper Recycling	Hotel	2	240L	
	Restaurant	0	240L	Three times a
	Bar	0	240L	week
	Conference / Lobby	1	240L	

#### 3.2.2 Garbage Room design requirements

Central garbage rooms are to be located within the basement for both buildings with the main garbage store room located on the Lower Ground of the Commercial tower. Temporary storage facilities are to be provided within each of the proposed buildings. The garbage rooms are to be serviced by a waste collecting Contractor in accordance with the minimum North Sydney Council requirements. Central garbage rooms have been designed in accordance with the estimated area calculations in Table 4 below.

Table 4: Estimated provision of garbage room areas for each building to provide adequate storage facilities

Building	Development Type	Collection Point	Estimated Area (	, ,
			General Waste	Recyclables
Commercial	Commercial, Retail and Hospitality Facilities	Basement / Lower Ground	49 (1)	82 (2)
Hotel	Hotel and Hospitality Facilities	Basement / Lower Ground	26 (1)	14 (1)

#### Note:



<sup>&</sup>lt;sup>1</sup> The estimated areas have been determined based bin sizes and with additional provision for storage and access of bins as required.

<sup>&</sup>lt;sup>2</sup> The estimated areas are based on the minimum Green Building Council of Australia provisions as defined the in Technical Manual for Green Star Office Design projects v3.

The following minimum design requirements apply to enclosed waste and recycling storage facilities:

General provisions applying to all uses

- Garbage rooms are to be provided for each building and additional day storage facilities are to be provided for the Hotel as the waste facilities are located on different levels.
- Compliance with the Building Code of Australia (BCA) and relevant Australian Standards.
- Waste storage areas and holding bays must be adequately signposted, with a description of storage facilities within the area. Clear and legible signage is to be installed indicating RECYCABLES designation points and sorting of materials, refer to Appendix C for details.
   Signs are to be displayed to internal wall(s) or on racks provided.
- Fully enclosed waste facilities must be ventilated by natural or artificial means complying with AS 1668.
- Sufficient artificial lighting controlled by motion detectors both outside and inside rooms in accordance with AS 1680.
- Any compactors or mechanical equipment is to be child proofed.

#### Finishes & Fittings

- Construction is to be reinforced concrete flooring and roof with fire rated wall construction to BCA requirements, refer to Fire Engineering specification for details. All construction materials are to be an approved solid impervious material and shall be cement rendered internally to a smooth surface where required.
- Floors are to be finished to a smooth even surface coved at the intersection with walls and plinths and graded to Sydney Water Corporation approval with basket trap drainage connected to sewer. Ramps to doorways as required.
- All ceilings in rooms are to be finished with a rigid smooth faced non-absorbent material
  capable of being easily cleaned. If paint is to be applied to ceilings it must be light in colour and
  gloss in type. The intersection of walls and ceilings are to be tight joined, sealed and dust proof.
  Drop in panel ceilings are not permitted.
- Provision of adequate supply of hot and cold water mixed through a centralised mixing valve with hose cock.
- All doors are to be close fitting and self-closing to prevent entry of trespassers and vermin. Doors to waste storage rooms must have a minimum clearance of 900mm.

#### Management

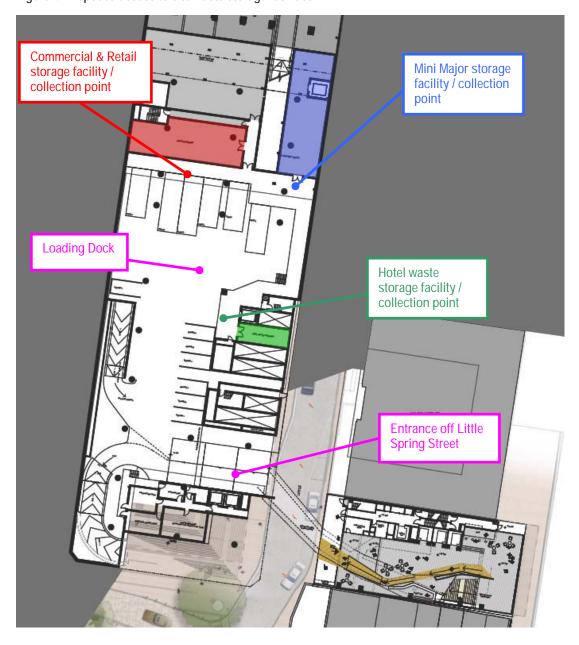
- Building management practices are implemented to meet minimum hygiene requirements. All bins are cleaned internally and externally on regular basis ie. at least every 3 months.
- Sufficient space allocation for the number of bins, Waste Contractor access and movements. Chutes (applies to Hotel only)
- Garbage Chutes may only be used for transfer of garbage and transport of recyclables via chutes is not allowed.
- Chutes are to be cylindrical in section with a diameter of 500mm or greater. A service room /
  compartment has been provided on each floor of the buildings to allow access to the garbage
  chute. Chutes will terminate in a garbage room and discharge directly into a container or waste
  compactor.
- Any compactors or mechanical equipment will be child proofed.
- Chutes will not open into habitable or public spaces and will be designed to minimise noise.
- Chutes will be completely enclosed in a fire shaft constructed of approved material and fitted with sprinklers in accordance with the BCA.



#### 3.2.3 Transportation & Access

Access to the garbage room located within the Commercial Tower Lower Ground floor is to be provided via Little Spring Street. All access is to be designed to accommodate typical North Sydney Council and/or Waste Contractor collection vehicles, refer Appendix Item D for standard waste vehicle collection details.

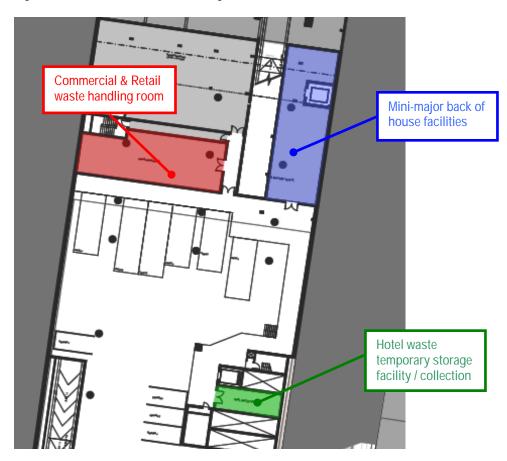
Figure 4: Proposed access to site waste storage facilities





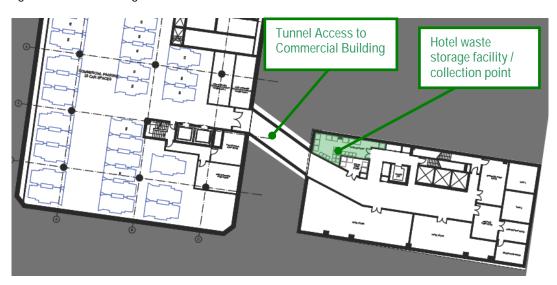
The following diagrams indicate the proposed locations of the garbage rooms within the Commercial Tower and Retail building for waste collection.

Figure 5: Lower Ground Waste Handling Facilities



Waste from the Hotel Tower is to be transported to a waste handling room on Basement Level 2 via garbage chute system located within the core on each floor. The chute facilities have been designed in accordance with the provisions of Section 3.2.2 of this report. Waste is then transported to the temporary storage/collection facility on Lower Ground floor for daily collection. Refer Figures 7 and 8 for facility details.

Figure 6: Waste handling facilities for the Hotel tower on Basement Level 2





Proposed Waste Chute

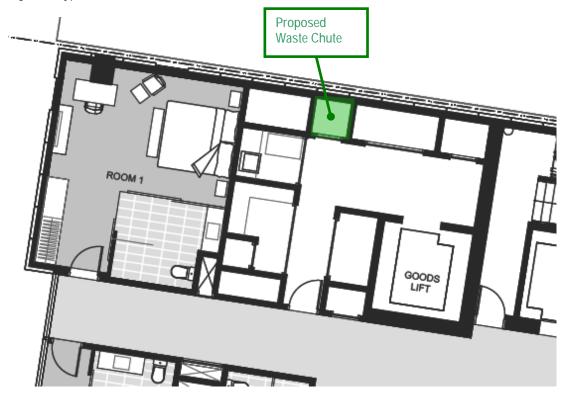
GARBAGE ROOM

SOILED LINEN STORE

GOODS LIFT

Figure 7: Detail of Hotel Tower waste handling facility Hotel Basement Level 2

Figure 8: Typical detail of Hotel Tower waste chute facilities on each level



#### 3.2.4 Refrigerated & Specialised wastes

We have not allowed for the generation of specialised or refrigerated wastes such as clinical wastes. Specialised containment is required for food scraps with daily collection; else a refrigerated room is required. No specialised storage units are required to be installed on site as there will be provision for daily collection of food scraps generated via the hotel and restaurant.



#### 3.2.5 Building Management

All waste generated for the development during operation is to be managed by the building owner or appointed Building Management group. The Commercial Office Tower is committed to developing a Building Users' Guide to monitor waste generation for the building. The minimum measures to be implemented in the guide are defined by Green Star Office Design & As-built market tool and include:

- Information on recycling facilities including collection schedule and minimum sorting requirements
- Locations of storage areas
- Access requirements and maintenance for storage areas

This guide is to form part of the Building Maintenance Guide and the ongoing performance information is to be transferred to tenant representatives, users, and occupants via building management. The role of building management is to:

- Monitor & report on waste generation to users
- Monitor & report on recycling generation to users
- Appoint relevant contractors to maintain storage areas
- Manage collection schedules by Waste Contractor
- Appoint contractors to transfer wastes generated from Office tenancies to collection points
- Appoint landscape Contractor to manage green wastes generated, via on site measures.
- Maintain written evidence, held onsite, of a valid and current contract with a licensed collector
  for waste and recycling collection and disposal. Contracts are encouraged to include
  allowances for the collection and recycling of high grade and low grade office paper, batteries,
  equipment containing printed circuit boards, computers, fluorescent tubes, smoke detectors and
  other recyclable resources from the waste stream.
- Maintain signage within and around garbage rooms, bins and recycled waste types etc.

#### Tenant / User arrangements

It is the responsibility of the tenant, user or occupant of each building class to ensure that wastes are sorted for delivery to the garbage rooms. Delivery from the tenancies may vary. It is anticipated that:

- Office tenants will have an appointed cleaning contractor to transfer general waste (daily for office working days) and recycled wastes from floors to collection point in basement.
- Retail tenants will transport general and recycled wastes to collection point in point in lower ground basement at the end of general trading
- Hotel management to have appointed cleaning staff or contractor to transfer recyclable
  materials from floors to collection point in basement level 2 on a daily basis. General wastes are
  to be transported to chutes located on the floors to the garbage room. Waste is then to be
  transferred to collection point storage room on lower ground for collection by waste contractor.

#### Waste Contractor arrangements

The Waste Contractor responsibilities include:

- Office
   — collect general and recycled wastes from garbage rooms located within basement area
   as defined in Section 3.2.3 of this report.
- Retail collect general and recycled wastes from garbage rooms located within basement area as defined in Section 3.2.3 of this report.
- Hotel collect general and recycled wastes from garbage rooms located within basement area as defined in Section 3.2.3 of this report.



### 4. Summary

Connell Wagner has prepared this document to satisfy the requirements of North Sydney Council and relevant Codes and Standards. The document defines the proposed waste management strategy for the development during operation and minimum design requirements for both of the proposed buildings. The details have been prepared in accordance with North Sydney Council development control plans and attachments.



# Appendix A

Waste Calculations for Demolition & Construction

## Appendix A

Table 5: Estimated demolition phase waste calculations

				DESTINATION	
MATE	RIALS ON SITE		REUSE AND	RECYCLING	DISPOSAL
Type of materials	Est. Vol. (m³)	Est. Wt. (t) 1	ON-SITE	OFF-SITE	Contractor & Landfill site
Excavated Materials	41,500	53,950	15%	35%	50%
Bricks / Blockwork	2,500	5,200	0%	90%	10%
Tiles	1,000		0%	10%	90%
Concrete	4,000	4,400	0%	95%	5%
Timber	6,000	6,600	0%	50%	50%
Plasterboard	1,500		0%	30%	70%
Steel	10,000	4,875	0%	70%	30%
Aluminium	2,000	1,300	0%	70%	30%
Glass	100		0%	90%	10%
Paints	5		0%	100%	0%
PVC	500		0%	80%	20%

Note: <sup>1</sup> Waste tonnage estimates have been determined in accordance with NSW EPA Waste Density Calculator where possible.

Table 6: Estimated construction phase waste calculations

				DESTINATION	
MATE	RIALS ON SITE		REUSE AND	RECYCLING	DISPOSAL
Type of materials	Est. Vol. (m³)	Est. Wt. (t) <sup>1</sup>	ON-SITE	OFF-SITE	Contractor & Landfill site
Bricks / Blockwork	10	13	0%	90%	10%
Tiles	5		0%	10%	90%
Concrete	70	77	0%	95%	5%
Timber	150	165	0%	50%	50%
Plasterboard	120		0%	30%	70%
Steel	5	3	0%	70%	30%
Aluminium	50	32.5	0%	70%	30%
Glass	10		0%	90%	10%
Paints	5		0%	100%	0%
PVC	50		0%	80%	20%
Cardboard	1,000	50	0%	100%	0%
Pallets	1,000	400	10%	80%	10%

Note: <sup>1</sup> Waste tonnage estimates have been determined in accordance with NSW EPA Waste Density Calculator where possible.



# Appendix B

North Sydney Council Waste Management Plan

#### **APPLICATION FORM**

## **Waste Management Plan**



#### 1. LAND USE OR ACTIVITY PROPOSED

I have read and understand the Privacy Statement

PRO	PERTY DETAILS	
Unit 1	No: House No:	Street: 88 Walker Street & 71-78 Berry Street
Subu	rb:_North Sydney	Lot + DP/SP:Lot 1 - DP1078998 (Berry Street) / Lot 1 - DP832416 (88 Walker)
Owne	er: Eastmark Holdings	LULT - DF032410 (66 Walker)
APP	LICANT'S DETAILS	
Name	e:Eastmark Holdings	
Posta	1 Address: 5 Roger Street	DX:
Subu	rb & Postcode: Habberfield 2045	
Phone	e No:9801 1542	
BUII	LDINGS AND OTHER STRUC	CTURES CURRENTLY ON SITE
Shopp		m <sup>2</sup> and is currently occupied by a 3 storey retail building (known as of retail and one level of basement car parking. 88 Walker Street has ar rey commercial building.
BRII	EF DESCRIPTION OF PROP	OSAL
comm One (1 storey carpar One (1	ercial office, retail, hotel and hosp off) commercial office building w Office building with thirty one lev king. off) hotel building twenty seven s	elop two existing sites into a viable mixed use development of bitality. The proposed development consists of: with retail and hospitality facilities. The building is to be a thirty five yels of office space, two levels of retail, and three levels of basement storeys high with two levels of basement dedicated to hotel operations yellow the storeys high with two levels of basement dedicated to hotel operations yellow two existing facilities and are linked via an air-bridge.
The	details provided on this form rela	ate to the management of waste for this project.
Sign	ature of Applicant	Date
	this form. The supply of information by you is not be able to process your application. Cou ensure that this information remains accura information held by Council. This application	PRIVACY STATEMENT  orm will only be used to fulfil the purpose for which it is being collected as described on is voluntary, but if you cannot, or do not wish to, provide the information sought, we may uncil is to be regarded as the agency that holds the information and will endeavour to ate and up-to-date. You may make an application for access or amendment to this in form is accessible to the public upon written application, subject to Council's Privacy vernment Act 1993 and the Freedom of Information Act 1989.

Ph: 9936 8100 Fax: 9936 8177 Email: <a href="mailto:council@northsydney.nsw.gov.au">council@northsydney.nsw.gov.au</a> 10/01/2008

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MATERIALS ON SITE				DESTINATION	
Type of materials	<b>-</b>	Estimated	Reuse and Recycling	Ω	Disposal
	Vol. (m3)	Wt. (t)	ON-SITE Specify proposed reuse or on-site recycling methods	OFF -SITE Specify contractor and recycling outlet	Specify contractor and landfill site
Pleas Mana	se Refer Ak agement R	Please Refer Appendix A of this Waste Management Report for detailed calculations	Waste calculations	To be r Contra	To be nominated by Waste Contractor (once appointed)
			<del></del>		

PLEASE NOTE - Ensure that all details are in the correct columns

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MATERIALS ON SITE			DESTINATION		
Type of materials	Estimated	nated	Reuse and Recycling	Disposal	
	Vol. (m3)	Wt. (t)	ON-SITE Specify proposed reuse or on-site recycling methods	OFF -SITE Specify contractor and recycling outlet	Specify contractor and landfill site
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Pleas	e Refer A	Appendix Report fc	Please Refer Appendix A of this Waste Management Report for detailed calculations	To be nominated by Waste Contractor (once appointed)	ed by Waste ce appointed)
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# 4. ON-GOING MANAGEMENT OF WASTE

AND DESTINATION	area, Recycling ting Disposal Specify contractor
PROPOSED ON-SITE STORAGE AND TREATMENT FACILITIES	e.g. waste storage and recycling area, garbage chute, on-site composting compaction equipment
EXPECTED VOL. PER WEEK	Litres or m3
TYPE OF WASTE TO BE GENERATED	Please specify e.g. food waste, glass, paper, metal, off cuts etc

Note: Please Refer to Section 3.2 of this report for detailed analysis and breakdown of waste streams and waste handling facilities within the development.

PLEASE NOTE - Ensure that all details are in the correct columns

#### 5. ONGOING MANAGEMENT OF WASTE

Describe how you intend to ensure ongoing management of waste on-site (.e.g. lease conditions, caretaker/manager on-site). All waste generated for the development during operation is to be managed by the building owner or appointed Building Management group. Tenant / User arrangements It is the responsibility of the tenant, user or occupant of each building class to ensure that wastes are sorted for delivery to the garbage rooms. Delivery from the tenancies may vary. It is anticipated that: Office - tenants will have an appointed cleaning contractor to transfer general waste (daily for office working days) and recycled wastes from floors to collection point in basement. Retail - tenants will transport general and recycled wastes to collection point in point in basement. Hotel - management to have appointed cleaning staff or contractor to transfer general waste and recycled wastes from floors to collection point in basement level 2 on a daily basis. Waste then to be transferred to collection point storage room on lower ground for daily collection. Waste Contractor arrangements The Waste Contractor responsibilities include: Office - collect general and recycled wastes from garbage rooms located within basement area as defined in Section 3.2.3 of this report. Retail - collect general and recycled wastes from garbage rooms located within basement area as defined in Section 3.2.3 of this report. Hotel - collect general and recycled wastes from garbage rooms located within basement area as defined in Section 3.2.3 of this report.

# Appendix C

Standard Signage

# Appendix C

Standard Signage for Waste and Recycling bins













# Appendix D

**Collection Vehicles** 

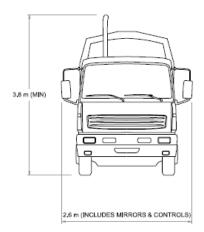
## Appendix D

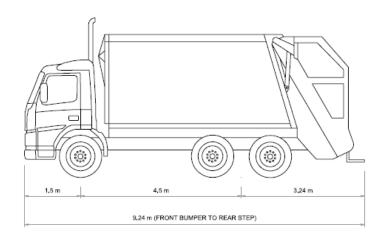
Details on Waste Collection Vehicles (Source: City of Sydney Council)

Waste collection vehicles may be side loading, rear end loading or front end loading. The size of vehicle varies according to the collection service. Thus it is impossible to specify what constitutes the definitive waste truck. Developers must consult with Council regarding the type of vehicle used in that area.

The following characteristics represent the typical collection vehicle, however these are for guidance only.

Any turning circle considerations must also include allowances for driver steering error and overhangs. The steering error allowance must be at least 0.6 metres (absolute minimum) on both sides of the theoretical wheel path and Im as a desirable minimum.





Rear loading collection vehicle for MGBs		
Length overall	9.54 m	
Width overall	2.6 m	
Operational height	<b>4</b> m	
Travel height	3.8 m	
Weight (payload)	26 tonnes	

These vehicles are to be accommodated on site.



# Appendix E

References

## Appendix E

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