The MACK GROUP

WASTE MANAGEMENT PLAN
(WMP)

DEVELOPMENT APPROVAL CONSENT
SSD 7484

SECTION 4.55 MOD 3
FOR EDUCATION BUILDING

Project:
Sandstone Precinct/ Patina Hotel
23-33 and 35-39 Bridge Street
Sydney

Client:
Pontiac Land (Australia) Pty Ltd

Prepared by:
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Date: 10th October 2018

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SANDSTONE PRECINCT
PATINA HOTEL

WASTE MANAGEMENT PLAN

1. EXECUTIVE SUMMARY

The Development Approval Consent has been granted (number SSD 7484). This submission is for Section 4.55 MOD 3 in relation to modifications to the Education Building.

Two iconic Sydney sandstone heritage buildings, the Lands and Education Buildings located between Bent Street and Bridge Street are to be developed into a world class luxury hotel. The two buildings will be connected via a tunnel in basement level 3. The Education Building is the larger of the two and has approximately 229 rooms, plus a restaurant, bars, function rooms and support spaces. The main waste store is located on its lower ground level, next to the loading dock and on street level.

The Lands Building is smaller and has approximately 71 to 61 rooms, plus several retail tenancies and a hotel guest lounge. It will have a satellite/ staging waste store where waste is collected prior to transfer to the main waste store in the Education Building. Provision for their waste has been included, based on the area schedule available.

The waste stores will be shared by the hotel and the retail tenants. All waste from each floor in each building will be transported by the cleaners on a regular basis to the main waste store in Education and the temporary waster store in Lands, via the respective service lifts.

All waste will end up in the main waste store in Education. The bins will be collected from the Education Building by a private contractor on a regular basis. Note that the access to the loading dock area is in an existing space which, in this heritage building, has limited width and headroom. As such, a private waste collection contractor will be selected based their ability to provide a suitable truck size. Discussions with Cleanaway indicated they have a suitable truck.

Cleanaway (a major waste contractor who collects waste from many properties in the City, including several hotels) indicated that, in practice they have found that the actual waste volumes are much smaller than those given by Council. Based on figures provided by Cleanaway for two other similar hotels the waste volumes for this hotel were estimated accordingly. Their data has been included at the end of this report. They requested for the name of the hotels to be kept confidential.

The waste volume could be reduced with the use of volume reducing equipment such as: a cardboard baler, an organic waste unit and a glass crusher. This will reduce handling, traffic and frequency of collection. The reduction of collection frequency would be beneficial due to the limited dock facilities.

The final frequency of collection will depend on the volume reduction equipment used and will be determined between the operator and the respective companies. Similarly the retail waste could be collected by the same contractors, subject to lease agreements.

Note that unless food waste is collected daily it either needs to be held under refrigeration or processed via an organic waste machine. The equipment is normally leased by the hotel/ operator. Access to the retail tenants could be negotiated at the tenancy agreement phase. Use of an organic waste unit has been assumed.

Waste bins will be provided by the hotel/ operators throughout the whole development. The cleaning contractors will be responsible for collecting and transporting the waste, via the service lifts, to the shared main waste store and the staging store.

Note that as some heritage doorways are existing and narrower than normal, transport bins and trolleys will need to be selected by the operator (able to negotiate these doors).

This report has been prepared based on Council of the City of Sydney "Policy for Waste Minimisation in new Developments" and waste volume data provided by Cleanaway.
The waste stores will be fitted out to meet Council requirements.

This report reviews the waste management system proposed for the project, including:

- Estimates of waste quantity
- Waste space allocation & equipment
- Management of waste
- Waste segregation and minimization procedures
- Access

The Waste Management Proposal is based on:

- Appropriately sized waste collection spaces
- Waste stores located inside the development
- Appropriately sized waste collection vehicle docking areas
- Segregation of waste into various waste streams
- Recycling of waste

2. ACCESS

The main waste store is located in the Education building, on its lower ground level, next to the loading dock and at street level. The existing access to the loading dock area in this heritage building has limited width and headroom.

A private waste collection contractor with a suitably sized vehicle will be selected by the operator. Cleanaway has indicated they have a vehicle able to negotiate this access.

There is no loading dock in the Lands Building. As such, the waste will be transported from their shared satellite/ staging waste store to the main waste store in the Education Building via the tunnel in basement 3. The transport of retail waste will be negotiated at the time of the tenancy agreement phase.

3. WASTE GENERATION ESTIMATE AND WASTE STORAGE SPACE PROVISION

Patina requested a review of Council provided waste volume rates (these being considered too high) with a view to reduce waste store sizes.

As such, the data provided by Cleanaway has been used for waste volume calculation purposes (as requested, the name of the hotels has been kept confidential), as follows:

Hotel A

All waste is comingled, no separation of waste at hotel
Some waste is collected as required, eg. old furniture, etc

No. rooms	509 (Patina is 59%)
No. restaurants	4
No. function seats	750 – 800 (Patina is 50%)
Waste volume	44760L per average month
Collection frequency	9x per month
Compactor	23 cm

Hotel B

All waste is comingled, no separation of waste at hotel
Some waste is collected as required, eg. old furniture, etc

No. rooms	415 (Patina is 72%)
No. restaurants	3
No. function seats	300 – 400 (Patina is 50%)
Waste volume	57700L per average month
Collection frequency	9x per month
Compactor	15 cm

Hotel A	44760L average per month	
Patina being 59%	26409 per month = 6603L per week	
Uncompacted	19807L (3x as much)	
General 60%	11885L @ 4x per week = 2971 L =	3x 1100L bins
Bottles 10%	1981L @ 4x per week = 496 L =	1x 660L bin
Paper 10%	1981L @ 4x per week = 496 L =	1x 660L bin
Organic 20%	3960L – use of organic waste unit	
Hotel B	57700L average per month	
Patina being 71%	40967L per month = 10242L per week	
Uncompacted	30726L (3x as much)	
General 60%	18435L @ 5x per week = 3687L =	4x 1100L bins
Bottles 10%	3073L @ 5x per week = 615L =	1x 660L bin
Paper 10%	3073L @ 5x per week = 615L =	1x 660L bin
Organic 20%	6145L – use of organic waste unit	

HOTEL

Conclusions

- The above comparison with the two given hotels (from data provided by Cleanaway) indicates that, based on the assumed collection frequency, a total of 3x 1100L (general waste) + 2x 660L bins (1x for paper/ cardboard, 1x for glass/ plastic) are required for this Hotel
- Collection frequency will depend on the use of waste volume reduction equipment, such as cardboard balers and glass crushers
- Collection frequency estimated at 4 - 5 times per week. This could be adjusted for busier or quieter times.
- A separate collection is assumed for items such as obsolete equipment, etc
- Use of an organic waste unit has been assumed.
- Plus circulation space
- Plus space for mobile waste oil units
- Plus bin wash space

Note:
Hotel waste in the Lands Building will initially be held in the shared satellite/ staging waste store. It will be transported to the main waste store in the Education Building on a regular basis. The above estimates include the Lands Building waste volume.

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RETAIL

These areas are located in the Lands Building, which is on hold. Retail waste will initially be held in the shared satellite/ staging waste store in the Lands Building. It will be transported to the main waste store in the Education Building on a regular basis.

GENERAL WASTE

Lower Ground

Retail	464	50L/100sqm	232.0	1299 (80%)
Restaurant	332	80L/100sqm	265.6	1488 (80%)
Kitchen	158	240L/100sqm	379.2	2655 (100%)
Total uncompacted				= 5442L

Total 5442L, collected 5x per week = 1089L = 1x 1100L bin
Plus circulation space

RECYCLABLE WASTE

Lower Ground

Retail	464	50L/100sqm	232.0	1299 (80%)
Restaurant	332	80L/100sqm	265.6	1488 (80%)
Kitchen	158	240L/100sqm	379.2	2655 (100%)
Total uncompacted				= 5442L

Total 5442L, collected 4x per week = 1361L = 2x 660L bin
One bin for paper/ cardboard and one bin for glass/ plastic
Plus circulation space

Use of organic waste unit has been assumed for the hotel.

It has been assumed that the retail tenants will also be given access to the hotel organic waste unit, access to this to be negotiated during the tenancy agreement phase. Alternatively, each tenant must provide refrigeration for organic waste.

Transport of the waste to the main waste store to be negotiated during the tenancy agreement phase in order to facilitate the orderly and managed transport of the waste through hotel property.

The areas above are approximate.

Assumptions:

- This report is part of the design process. The final sizing of waste storage spaces and frequency of waste collection will be made after final agreements are in place.
- The long term aim of the waste management strategy is to provide an ongoing and coordinated waste management service that satisfies mandatory authority requirements and is adaptable to changing operational needs.
- Private waste collection contractors, working with Management, will be responsible for providing a waste removal service, including the supply and maintenance of all equipment and the coordination of this service with the cleaning service.
- Fequency of collection is subject to the final arrangement with the contractor.
- Note that less frequent collection will require larger waste stores.
- The use of smaller bins will require more storage space
- Peak times may require more frequent collection.
- The use of volume reduction equipment will be beneficial to this project. It will assist in reducing waste volume and thus collection frequency in a compact and busy dock area.
- Council requires that, for premises where waste generated contains 20% by volume of fish, poultry or meat, or, which generates 50 litres of seafood, poultry or meat waste in total per day, must be collected daily or refrigerated whilst stored and awaiting collection. Use of an organic waste unit has been assumed.
- It has been assumed that the hotel and the retail week = 7 days
- Council does not provide separate rates for food waste
- The areas are Usable Floor Areas (NLA). They are "work in progress" and may change
  as the design process evolves

4. MANAGEMENT OF INTERNAL WASTE REMOVAL

Waste from all areas will be collected in dedicated bins and moved to the main waste stores of the Education Building by the cleaning contractor via the service lifts in each building. The main waste store will house both hotel and retail waste.

The Lands Building will have a satellite/ staging waste store on its lower ground level. This waste store will house both hotel and retail waste. The service lifts go down to basement 3. The two buildings are connected via the tunnel at basement 3.

Note that as some heritage doorways are existing and narrower than normal, transport waste bins and trolleys will need to be selected able to negotiate these doors.

5. WASTE REMOVAL AND VEHICLE MANOEUVRING

The shared main waste store is located in the Education Building on its lower ground level, near the loading dock and on street level. The access to the loading dock area in this heritage building has limited width and headroom.

The private waste collection contractor will park on Loftus Street and collect the bins from the main waste store.

There is no loading dock proposed in the Lands Building. As such, the waste will initially be collected in the shared staging store, prior to transport from this store to the main waste store in the Education Building via the tunnel in basement 3.

6. WASTE SEGREGATION AND MINIMISATION

The waste management strategy for the development will be continually evaluated by Management, to improve the service provided and to achieve the NSW Government's commercial and retail waste reduction targets

a) General Waste

Non-organic waste will be separated from organic waste.

b) Recyclable Waste

Separate recycling bins for nominated waste categories provided for:

- Paper and cardboard
- Comingled glass/ plastics/ aluminium cans/ metal
- Oils: A bunded and drained area is required within each waste store.

7. WASTE STORES REQUIREMENTS

The waste stores will be designed to meet Sydney City Council's and BCA requirements.

Floor finish

Floors will be of concrete slab construction, graded and drained to an approved connection to the sewer. The finish will be sealed, non-slip and impervious to grease and water. It will be coved at all wall junctions.

Wall finish

The walls will be constructed of solid impervious material, cement rendered to a smooth even surface coved at all intersections. Doors will be vermin proof and must be kept closed at all times.

Ceiling finish

The ceiling will be finished with a rigid, smooth faced, non-absorbent material, capable of being easily cleaned.

Ventilation

The waste stores will be ventilated by a separate system. The ventilation system will comply with AS 1668 Parts 1 & 2. By mechanical consultant.

Lighting
Suitable artificial lighting will be provided in accordance with relevant Australian Standards and the Building Code of Australia, to enable safe and appropriate disposal of waste at all times. By lighting consultant.

Waste oil
A bunded and drained area is required for holding waste oil containers.
Refer to Sydney Water for requirements.

Bin washing
A waste bin washing area will be provided at the dock, with hot and cold water and appropriate drainage. Refer to Sydney Water for requirements. By hydraulic consultant.

Safety signage
Safety and warning signage will be provided

Drainage
The waste store floor will be graded and drained to Sydney Water requirements

Doors
Door will be tight fitting to prevent the entry of vermin

Grease Traps
Refer to Sydney Water Guidelines for requirements. By hydraulic consultant

Equipment
All waste equipment (eg. bins, waste oil container, organic waste unit, baler, glass crusher, etc) will be purchased/ leased by the hotel operator.

The path of travel
It is considered that, at peak times, collection frequency will need to increase.
(from the main bin holding area/ main waste store to truck)
will meet the following:

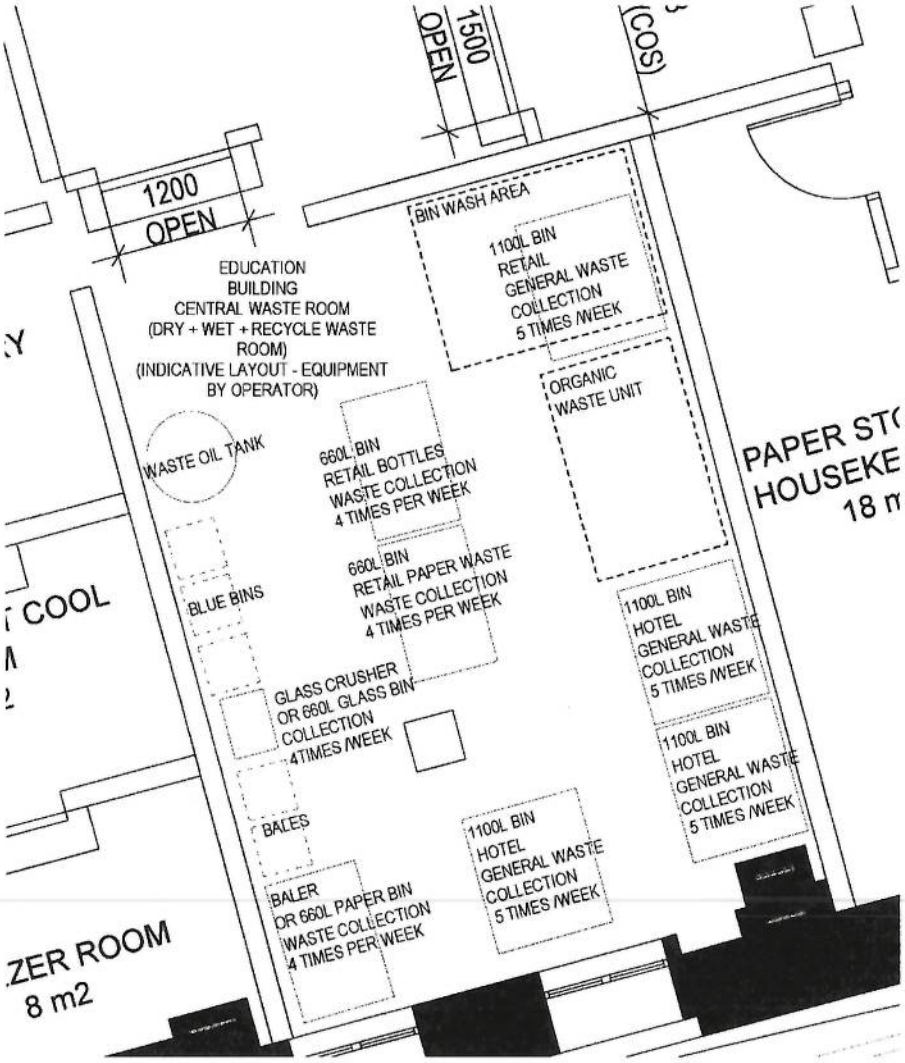
- No steps or kerbs
- Maximum transfer distance = 50 metres
- Maximum gradient = 1:14

8. BASE DOCUMENTS

This report has been based on the drawings and schedules provided by MAKE architects

8. WASTE ROOM LAYOUT

Following two pages show the indicative layout of the waste rooms in Lands building and Education building.



EDUCATION BUILDING – CENTRAL WASTE ROOM

NOTES:-

- Only Hotel staff has access to this waste room.
- All waste for both hotels + retail to be transported to this waste room for collection.
- Use of organic waste unit assumed.
- Use of glass crusher + card board baler could mean less frequent collection
- All equipment leased by hotel
- If a glass crusher is not used then this space will house a 660l bin emptied 4 times per week.
- If cardboard baler is not used then this space will house 1 x 660l bin emptied 4 times per week

9. APPENDIX

Information sent by Cleanaway

DATA PROVIDED BY CLEANAWAY

HOTEL A

workordr_schd_dt	workordr_volume	workordercharge_descript
17/10/2017	2	Clear 22M Bin (HL)
8/11/2017	1.24	Clear 22M Bin (HL)
21/11/2017	1.88	Clear 22M Bin (HL)
	5.12	
4/09/2017	6.1	Clear 23M Packer
7/09/2017	3.2	Clear 23M Packer
11/09/2017	5	Clear 23M Packer
14/09/2017	3.58	Clear 23M Packer
18/09/2017	5.14	Clear 23M Packer
21/09/2017	3.66	Clear 23M Packer
25/09/2017	5.74	Clear 23M Packer
28/09/2017	3.68	Clear 23M Packer
2/10/2017	5.66	Clear 23M Packer
5/10/2017	3.54	Clear 23M Packer
9/10/2017	5.72	Clear 23M Packer
12/10/2017	4.1	Clear 23M Packer
16/10/2017	5.42	Clear 23M Packer
19/10/2017	3.58	Clear 23M Packer
23/10/2017	5.92	Clear 23M Packer
26/10/2017	4.3	Clear 23M Packer
30/10/2017	5.8	Clear 23M Packer
2/11/2017	4.3	Clear 23M Packer
6/11/2017	5.38	Clear 23M Packer
9/11/2017	3.7	Clear 23M Packer
13/11/2017	6.06	Clear 23M Packer
16/11/2017	4.42	Clear 23M Packer
20/11/2017	6.18	Clear 23M Packer
23/11/2017	4.06	Clear 23M Packer
27/11/2017	6.36	Clear 23M Packer
30/11/2017	4.3	Clear 23M Packer
	124.9	

HOTEL B

workordr_scl	workordr_v	workordercharge_descript
15/09/2017	2.2	Clear 15M Bin (HL)
	2.2	
1/09/2017	5.58	Clear 15M Packer
4/09/2017	5.24	Clear 15M Packer
7/09/2017	5.52	Clear 15M Packer
11/09/2017	7.02	Clear 15M Packer
15/09/2017	7.5	Clear 15M Packer
18/09/2017	6.18	Clear 15M Packer
22/09/2017	6.68	Clear 15M Packer
25/09/2017	5.86	Clear 15M Packer
29/09/2017	6.54	Clear 15M Packer
2/10/2017	5.26	Clear 15M Packer
6/10/2017	6.06	Clear 15M Packer
9/10/2017	6.5	Clear 15M Packer
16/10/2017	7.3	Clear 15M Packer
12/10/2017	5.58	Clear 15M Packer
20/10/2017	6.7	Clear 15M Packer
23/10/2017	6.62	Clear 15M Packer
27/10/2017	6.94	Clear 15M Packer
30/10/2017	6.74	Clear 15M Packer
3/11/2017	6.54	Clear 15M Packer
6/11/2017	5.34	Clear 15M Packer
10/11/2017	6.86	Clear 15M Packer
13/11/2017	5.48	Clear 15M Packer
17/11/2017	6.42	Clear 15M Packer
20/11/2017	3.48	Clear 15M Packer
24/11/2017	6.88	Clear 15M Packer
27/11/2017	8.22	Clear 15M Packer
30/11/2017	6.18	Clear 15M Packer
	169.22	

HOTEL B - REAR LOADING

	Set 17	Oct-17	Nov-17	
660 General	0	0	0	
660 Comingle	65	69	71	
120 L Organic	188	182	129	
240L Confidential	0	0	0	On request
240L recycle	85	20	94	
240L comingle	8	12	27	

HOTEL C

workordr_sch	workordr_v	workordr_l	workordercharge_descript
26/10/2017	0.76	NAA	Clear 10M Bin (HL)
	0.76	**Tone**	
1/09/2017	2.24	NAT	Clear 8.0M Packer (HL)
6/09/2017	2.16	NAT	Clear 8.0M Packer (HL)
11/09/2017	2.12	NAT	Clear 8.0M Packer (HL)
15/09/2017	2.12	NAT	Clear 8.0M Packer (HL)
20/09/2017	2.16	NAT	Clear 8.0M Packer (HL)
25/09/2017	2.1	NAT	Clear 8.0M Packer (HL)
29/09/2017	1.72	NAT	Clear 8.0M Packer (HL)
4/10/2017	2.28	NAT	Clear 8.0M Packer (HL)
9/10/2017	2.1	NAT	Clear 8.0M Packer (HL)
13/10/2017	1.82	NAT	Clear 8.0M Packer (HL)
18/10/2017	1.8	NAT	Clear 8.0M Packer (HL)
23/10/2017	1.86	NAT	Clear 8.0M Packer (HL)
27/10/2017	1.86	NAT	Clear 8.0M Packer (HL)
1/11/2017	1.9	NAT	Clear 8.0M Packer (HL)
6/11/2017	2.42	NAT	Clear 8.0M Packer (HL)
10/11/2017	1.64	NAT	Clear 8.0M Packer (HL)
15/11/2017	2.02	NAT	Clear 8.0M Packer (HL)
20/11/2017	2.48	NAT	Clear 8.0M Packer (HL)
24/11/2017	1.88	NAT	Clear 8.0M Packer (HL)
29/11/2017	2.22	NAT	Clear 8.0M Packer (HL)
	40.9	**Tone**	

HOTEL C - REAR LOADING

	Set 17	Oct-17	Nov-17	
120L Cart	6	3	0	
120 L Organic	126	140	101	
240L Confidential	0	0	0	on request
240L recycle	6	0	0	
240L comingle	49	40	56	

TRUCK SIZES

Grease Trap

Fleet Number	Rego Number	Make	Model	Year
VV00298	AZ41JF	Mitsu	FN6203A	2007
VV00301	AA60GN	Mitsu	FS52JS4	2004
VV00302	AF85YA	Ford	F350	2004
VV00303	AP81DF	Mitsu	FN6203A	2006
VV00309	BE08HU	Isuzu	NQR498A	2009
VV00320	BK02UL	Hino	300C07	2010
VV00370	CC99KL	MAN	TGM	2014
VV00379	CD04XI	Fuso	Canter	2015

Bulk /Compactor

Hino 1426 (14 ton GVM)

Baler Truck

Will be simliar size to Bulk Truck

Rearlift

Comingle	Vehicle clearar	Vehic	Vehicle cl	Vehicle clearance required: 2.5m (h) x 2.5m (w) x 8
Organics	Vehicle height	Vehic	Vehicle h	Vehicle height in operation: 3.4 metres
Paper	Vehicle turning	Vehic	Vehicle tu	Vehicle turning circle: 17.7 metres
General Waste				

Please note sizes are approximate measurements. Trucks may vary by location.