

ONE CARRINGTON STREET

Sydney

WASTE MANAGEMENT PLAN

PART 1

Based on Green Star MAT-1 Recycling Waste Storage

PART 2

Based on City of Sydney Council Guidelines

Prepared by:

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Date: 10th March 2014

ONE CARRINGTON STREET WASTE MANAGEMENT PLAN

The central waste storage facilities meet both the Green Star requirements and the City of Sydney Council requirements.

PART 1

SECTION 1

CENTRAL WASTE STORAGE

Based on Green Star MAT-1 Recycling Waste Storage

INTRODUCTION

Offices generate waste. This waste can be recycled. To make recycling more economic, it is beneficial for waste to be collected quickly and efficiently. A convenient, suitably sized, purpose designed waste store will help occupants to store waste. The purpose of this credit is to encourage and recognize the inclusion of a waste store in the building.

MAT-1 Recycling Waste Storage

Aim of Credit

To encourage and recognize the inclusion of storage space that facilitates the recycling of resources used within buildings to reduce waste going to landfill.

Credit Criteria

Two points are awarded where a dedicated waste storage area for the separation and collection of office recyclables is provided and it:

- Is adequately sized to handle in accordance with table MAT 1-1
- Meets the access requirements of "Policy for Waste Minimisation in New Developments" Council of the City of Sydney (NSW 2005)
 - Section A, points A12 through A17 and
 - Section C, points C14 and C15
- Is located on the same level as the loading dock with a clearly marked, sign posted, convenient and guaranteed access route within one of the following walking distances:
 - 20m of the exit used for recycling pick up
 - OR 20 m of the lift core serving all floors
 - OR 3 m of the shortest route connecting the lift core serving all floors and the exit used for recycling pick up
- Is separate from, but adjacent to, general waste facilities

MAT 1 Recycling Waste Storage

AIM OF CREDIT

To encourage and recognize the inclusion of storage space that facilitates the recycling of resources used within buildings to reduce waste going to landfill.

CREDIT CRITERIA

1. Provide a dedicated storage area for the separation and collection of recyclable waste

- The project consists of three "sectors": the "Tower", Shell House and 285 George Street
- A dedicated, central, storage space for the separation and collection of recyclable waste will be provided on the George Street level and the Wynyard Lane levels (separate dedicated waste store for 285 George Street offices).
- Recyclable waste will be collected from each floor, in each sector, by the cleaners.
- It will be taken down to the central waste store by various goods lifts
- The waste collection contractor will collect the waste from the central waste store

2. Meets the access requirements of "Policy for Waste Minimisation in New Developments" NSW 2004. Section A, points A-12 to A-17

A12 Waste store must be convenient for users and collection staff

The central waste store space is convenient to users and collection staff

It is located on the George Street and Wynyard Lane level near the goods lifts

A13 Minimum need to reverse for collection vehicles

There is minimum need to reverse

Collection vehicles will approach and leave the waste store area in a forward direction

A14 Collection space to have minimum 3.8 metre headroom

Central waste store is on the George Street and Wynyard Lane levels

Complies

A15 Space for waste loading operations to be on level surface

Complies

A16 Level path for wheelie bins between waste store and collection vehicle

Path is free of steps - complies

The maximum travel distance from the central store to the loading bay is within 10 metres - complies

A17 Adequate vehicle headroom required.

Complies

Vehicles must be able to enter and leave the building in forward direction.

Complies

3. Separate from but adjacent to general waste facilities

The recyclable waste store is separate and near the general waste store

4. Located on the same level as the loading dock.

Complies

5. It has clearly marked, sign posted, convenient and guaranteed access route which allows:

- There is level access from the lifts to the central waste store
- As the waste will be in bins this avoids the need for manual handling of the waste
- It is within one of the following walking distances:
 - 20 m of the exit used for recycling pick up
 - Or 20 m of the goods lift
 - Or 3 m of the shortest route connecting the lift core serving all floors and the exit used for recycling pick up

COMPLIANCE REQUIREMENTS

The recycling waste store will effectively serve all building users and occupants in line with the following.

As per table MTA 1-1, it will be sufficiently sized to accommodate the following recyclables:

- Cardboard
- Glass
- Plastics/ mixed containers
- Plastics/ soft containers
- Plastics/ polystyrene
- Metals
- Used cooking oil
- Organic (compost) materials

Waste Store Sizing

As per Table MAT 1-1

GFA - 285 George Street =	2,779 sqm
For areas over 1,000 sqm waste store =	0.80%
Recyclable waste store =	22.2 sqm
Add general waste = 22.2 sqm + 25%	
Total store for 285 George Street =	27.8 sqm

GFA – Shell House =	10,428 sqm
For areas over 10,000 sqm waste store =	0.25%
Recyclable waste store =	26.1 sqm
Add general waste = 26.1 sqm + 25%	
Total store for Shell House =	32.6 sqm

GFA – Tower =	71,360 sqm
For areas over 20,000 sqm Gross Floor Area = 0.15%	
Recyclable waste store =	107.1 sqm
Add general waste = 107.1.1 sqm + 25%	
Total store for Tower =	133.9 sqm

Documentation: Design Rating

Submit all the evidence and ensure it readily confirms compliance
Short Report

1. Identify how the design complies with the access requirements of NSW document "Policy for Waste Minimisation in New Developments" 2004.

And referencing drawings.

Refer to plans attached.

Section A points A-12 to A-17.

Also refer to previous section.

A12 Waste store will be convenient for users and collection staff

A13 There will be minimal need to reverse for collection vehicles

A14 Collection space - complies (minimum 3.8 metre headroom)

A15 Space for waste loading operations will be on level surface

A16 There will be a level path for wheelie bins between waste store and the lifts

Free of steps.

Max.travel distance = 5 - 10 metres for wheelie bins

(240/ 660/ 1000 L bins)

Or 3 metres for 1500/ 2000 L bins.

A17 Adequate vehicle headroom required.

Complies

Vehicles will enter and leave the site in a forward direction

Complies

Section C points C14 and C15

C14 Provide adequate clearances for waste vehicle

Complies

C15 If headroom less than 3.8 metres, provide written evidence that contractor has vehicle that can work with the site clearances

2. Provide an appended profile of the projected waste generation produced by a waste auditor

Refer to Table 2

3. Describe the provision for recycled waste collection

- Cleaners will clear all waste from each tenancy on a regular basis.
- Recyclable waste will be held in 240 L bins
- They will transport the bins to the central store for collection by a waste contractor
- The waste collection vehicle will park in the loading bay and collect the bins.
- Separate zones will be provided for recyclable waste and general waste.

4. Provide calculations to demonstrate that the area provided is adequately sized to handle the recyclable waste streams specified in the Compliance Requirements based on projected waste generated

Refer to Table MAT 1-1, pages 5 and 6.

SECTION 2 - APPENDIX

THE MACK GROUP EXPERIENCE - WASTE MANAGEMENT REPORTS

Our practice has been operational since 2001. As part of the DA, CC, W1 and Green Star submissions to Councils, we confirm we have completed the following operational waste reports.

Wetherill Park Stocklands Shopping Centre – Commercial & Retail – Green Star
 Shellharbour Stocklands Shopping Centre – Commercial & Retail – Green Star
 Merrylands Stocklands Shopping Centre – Commercial & Retail – Green Star
 Macquarie University Library – Green Star
 King Street Wharf – Residential, Commercial, Retail & Hotel
 World Square - Commercial & Retail
 Barangaroo – Commercial & Retail & Residential – Green Star
 Randwick Race Course and Hotel
 Centrelink ACT – Commercial – Green Star
 2 Park Street Sydney - Commercial
 421 George Street - Commercial & Retail
 333 George Street – Commercial & Retail – Green Star
 339 Pitt Street - Commercial & Retail
 115 Bathurst Street - Commercial & Retail
 161 Clarence Street – Commercial & Retail
 20 Martin Place – Commercial & Retail – Green Star
 Sussex & Hay Street – Commercial & Retail – Green Star
 Kurnell – Commercial
 Energy Australia - Commercial
 Woolworths Norwest Headquarters - Commercial
 Woolworths Minchinbury Depot - Commercial
 Discovery Point - Residential
 Homebush residential
 Newtown Residential

CURRICULUM VITAE

Ms. Teresa Mack - Principal

B.Sc Arch. 1974 Sydney University

B. Arch. 1976 Sydney University

Ms. Mack graduated as an architect and after gaining experience in various types of projects decided to specialise in commercial kitchen & bar consultancy work. She has over 30 years experience in this field and has had direct hands-on experience in all projects undertaken by this office. She started The Mack Group in 1991 and since that time the company has accumulated a varied and lengthy portfolio of successfully completed projects. In 2001 the company diversified into the preparation of operational waste management reports and has since completed many such reports for a large variety of projects.

Ms Nisha Tripathi – Senior Consultant

B.Arch. First Class Honours 2003 Mumbai University

Masters Design Science – Sustainable Design 2006 - Sydney University

Ms. Tripathi has been with the Mack Group since 2007. In that time she has participated in many projects and has gained a very thorough grounding in the field. Her particular interests lie in the development and implementation of sustainability.

ONE CARRINGTON STREET WASTE MANAGEMENT PLAN

PART 2 WASTE MANAGEMENT PLAN

Based on City of Sydney Council Guidelines

1. EXECUTIVE SUMMARY

The proposed building sits on Carrington Street. It consists of three "sectors": the Tower, Shell House and 285 George Street. There are 2 levels of basement and three levels of "mixed" use: the Concourse level, Hunter Connection level and George Street level, plus the Wynyard Street level. The scope also includes the Carrington Street retail connection to George Street.

The central waste stores are located on the George Street level. They consist of recyclable waste and general waste spaces. Waste truck access is via the ramp at the Wynyard Street level. The trucks will go down one level to the George Street level, where the loading bays and waste stores are located. Private waste collection contractors will collect the waste. Waste from the 285 George Street offices will be collected in a separate dedicated waste store in this building. The store is located on the Wynyard Lane level.

Waste bins will be provided in each tenancy and will be incorporated into the final design by each tenant. The tenants will be responsible for collecting, segregating and transporting their waste, from each sector, via the various goods lifts, to the central waste stores.

Subject to final tenancy agreements, negotiated collection frequency, use of waste compaction equipment and waste bins sizes, and based on the waste generation estimates, it is envisaged that a collection service three times per week for general waste and for recyclable waste will be required.

This report has been prepared based on Sydney City Council's "Policy for Waste Minimisation in New Developments". The waste store 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

2. ACCESS

Waste truck access is via the ramp at the Wynyard Street level. The trucks will go down one level to the George Street level, where the loading bays and waste stores are located. Private waste collection contractors will collect the waste. Office waste from 285 Street will have a separate dedicated waste store located off Wynyard Lane.

3. WASTE GENERATION SCHEDULE IN CUBIC METRES (cm) per week

Area	Size sqm	Day Rate	Total L/day	Total L/w
General Waste				
Commercial	66753	10L/100sqm	6675.3	33377
Retail	3093	50L/100sqm	1546.5	10826
Food retail	2609	80L/100sqm	2087.2	14611
Retail/ other	1651	240L/100sqm	3962.4	27737
TOTAL				86551
Recyclable Waste				
Commercial	66753	10L/100sqm	6675.3	33377
Retail	3093	50L/100sqm	1546.5	10826
Food retail	2609	80L/100sqm	2087.2	14611
Retail/ other	1651	240L/100sqm	3962.4	27737
TOTAL				86551

4. ESTIMATE OF WASTE VOLUME

The waste volumes have been estimated after discussion with private waste collection companies and also using the rates given by Sydney City Council. A summary of the estimated volumes has been tabulated below.

	Weekly Volume	Pick up Bins 240 L	Pick up Bins 660L
General waste	86551	360	131
Recyclable waste	86551	360	131

Assuming collection is 3x per week, the volume is as follows

General waste	120	44
Recyclable waste	120	44

Assumptions

- For "food retail" and "retail" spaces a 7 x day week was assumed.
- For "commercial" spaces a 5 x day week was assumed

- The "food retail" space is an estimate and will depend on final tenancy agreements
- This report is part of the application process. The final sizing of waste storage spaces and frequency of waste collection will be made after final tenancy agreements are in place.

5. ESTIMATE OF REQUIRED STORAGE SPACE

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 Building 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.

Due to the various types of waste being generated, it is proposed to manage the waste collection as follows:

A. General Waste Store

Assume 120 bins @ 240L size, collected 3x per week

Bin size = 735 x 580

Parking area for 120 bins =	73 sqm
Wash bay =	2 sqm
Circulation =	30 sqm
Store size =	105 sqm

Commercial =	38% =	40 sqm
Retail =	13% =	13 sqm
Food retail =	17% =	18 sqm
Retail/ other =	32% =	34 sqm

B. Recyclable waste store

Assume 240L bins @ 240L size, collected 3x per week

Bin size = 735 x 580

Parking area for 120 bins =	73 sqm
Wash bay =	2 sqm
Circulation =	30 sqm
Store size =	105 sqm

Commercial =	38% =	40 sqm
Retail =	13% =	13 sqm
Food retail =	17% =	18 sqm
Retail/ other =	32% =	34 sqm

6. **MANAGEMENT OF INTERNAL WASTE REMOVAL**

Waste from each tenancy will be collected, segregated and stored in dedicated bins by the tenant, within their tenancy. This waste will then be taken to the central waste stores by the cleaning contractor via the various goods lifts.

Waste from the common areas will be collected in dedicated bins and moved to the central waste store by the cleaning contractor. The cleaning contractor will be responsible for cleaning all the waste handling areas.

Notes

- 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. The provision of refrigeration is by the tenants.
- Consideration to be given to the use of cardboard balers and compactors, for waste volume reduction and thus collection frequency.
- Consideration to be given to secure waste bins for relevant tenancies.
- Should the stores be subdivided then additional area needs to be provided for bin washing and circulation in each store.

7. **WASTE REMOVAL AND VEHICLE MANOEUVRING**

The waste removal trucks will access the site from the Wynyard Lane level and travel down one level to the loading bays and central waste stores areas. The contractors will move the general waste bins or the recyclable waste bins to the loading bays.

8. **WASTE SEGREGATION AND MINIMISATION**

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

a) Wet and General Waste

Non-organic waste will be separated from organic waste.
Putrescible wet waste will be placed in 240 litre bins.

b) Recyclable Waste

Each tenant will be responsible for separating recyclable waste from non-recyclable waste. Separate recycling bins for nominated waste categories will be provided at the waste store:

- Paper and cardboard
- Glass/ plastics/ aluminium cans/ metal
- Oils

9. WASTE STORES REQUIREMENTS

Based on the waste volume calculations, it is expected that a collection three times per week will be required, all as coordinated by Building Management.

The waste stores will be designed to meet Sydney City Council's "Policy for Waste Minimisation in New Developments". Bin storage areas within each tenancy will also be designed in line with Council requirements by the tenants.

Ventilation

The waste stores will be ventilated by a separate system. The ventilation system will comply with AS 1668 Parts 1 & 2 and Council's Ventilation Code 1983.

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.

Lighting

Suitable artificial lighting will be provided with a switch both inside and outside the rooms.

Bin washing

A central waste bin washing area will be provided in the basement, with hot and cold water and appropriate drainage.

Safety signage

Safety and warning signage will be provided

10. BASE DOCUMENTS

This report has been based on the following drawings:

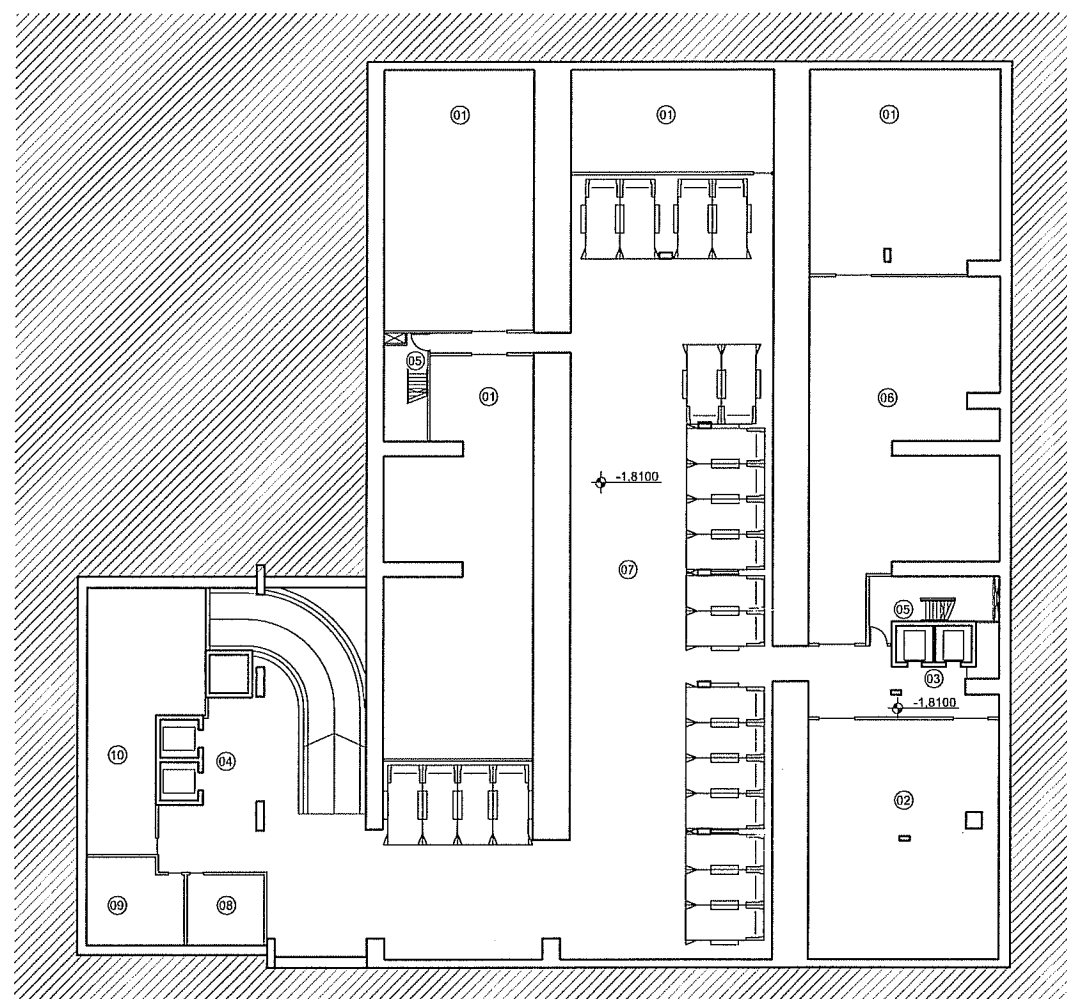
PDA 2002 00	Lower Basement
PDA 2003 00	Basement level
PDA 2004 00	Hunter Connection level
PDA 2005 00	Concourse level
PDA 2006 00	George Street level
PDA 2007 00	Wynyard Lane level

The GFA's and NLA's were provided by Architectus



Do not scale drawings.
Verify all dimensions on site.
Dimensions in millimetres unless otherwise stated.
Levels are in metres above Australian Height Datum
unless otherwise stated.
All discrepancies to be notified in writing to
Make+Architectus.
Dimensions govern.

- 01: Plant
- 02: End of Trip Facilities
- 03: Shuttle Lift to Office Lobby
- 04: Shell House Shuttle Lifts
- 05: Escape stairs
- 06: Potential Cycle Parking Extension
- 07: 23 Car parking spaces
- 08: MDF Room 1
- 09: In-Building Mobile Coverage Room
- 10: Main Switch Room



issue	reason for issue	date	checked
Rev 00	For Landowners consent	03.03.2014	

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ASN 11 098 489 448

project **One Carrington Street**

drawing

Lower Basement Level

scale 1:250 status drawing no.

drawn PDA2002

paper size **A1**

checked MC/IL/PS Issue

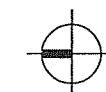
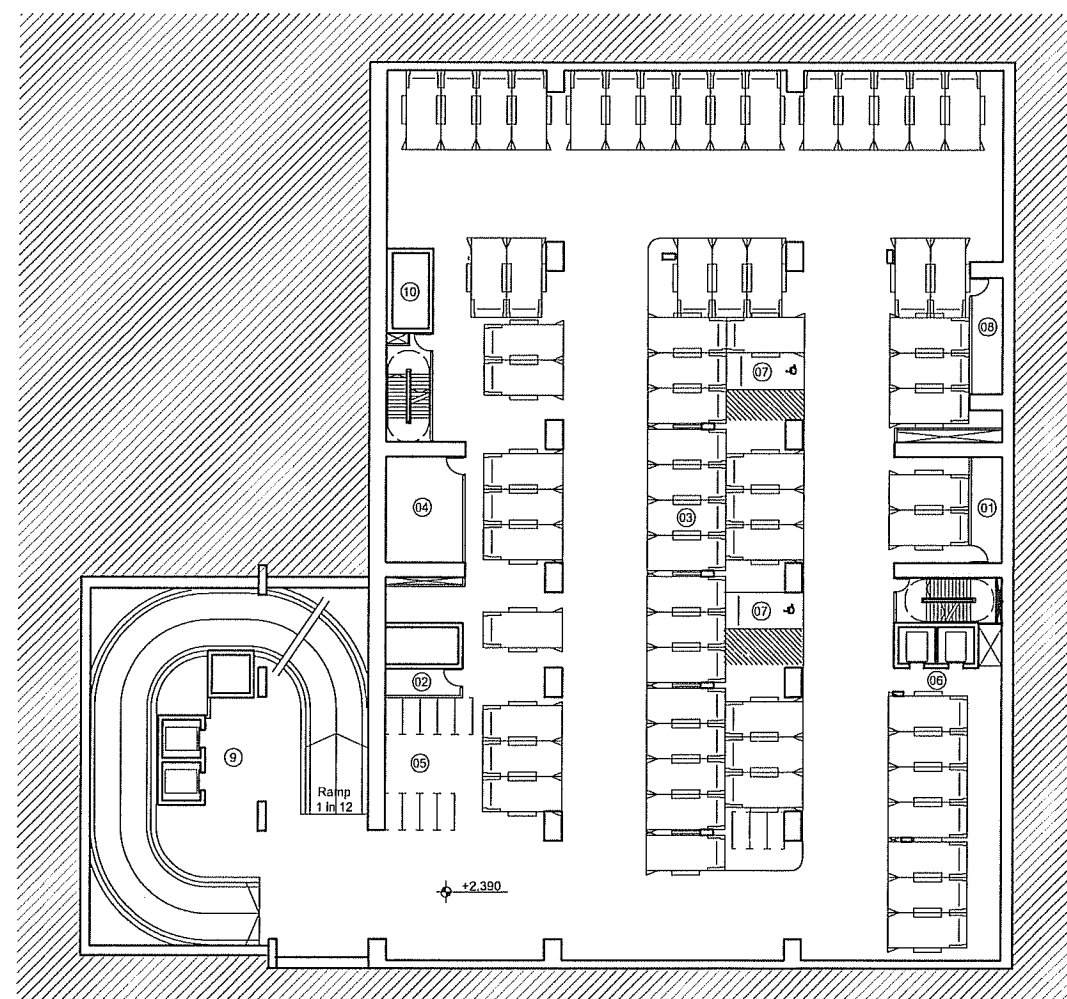
project no m: 958 a: 120298.00

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- 01: Car park Extract Riser
- 02: Rainwater Re-use plant
- 03: 65 Carparking Spaces
- 04: Car park supply riser
- 05: 12 Motorcycle parking spaces (8 required)
- 06: Shuttle lifts to Mezzanine
- 07: Disabled Car Park space
- 08: MDF Room 2
- 09: Shell House Shuttle Lifts
- 10: Retail Lift Pit

[illegible]

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project **One Carrington Street**

drawing

Basement Level

Shell House Basement Level

scale 1 : 250 status drawing no.

drawn PDA2003

paper size **A1**

checked MC/PS/II Issue

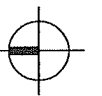
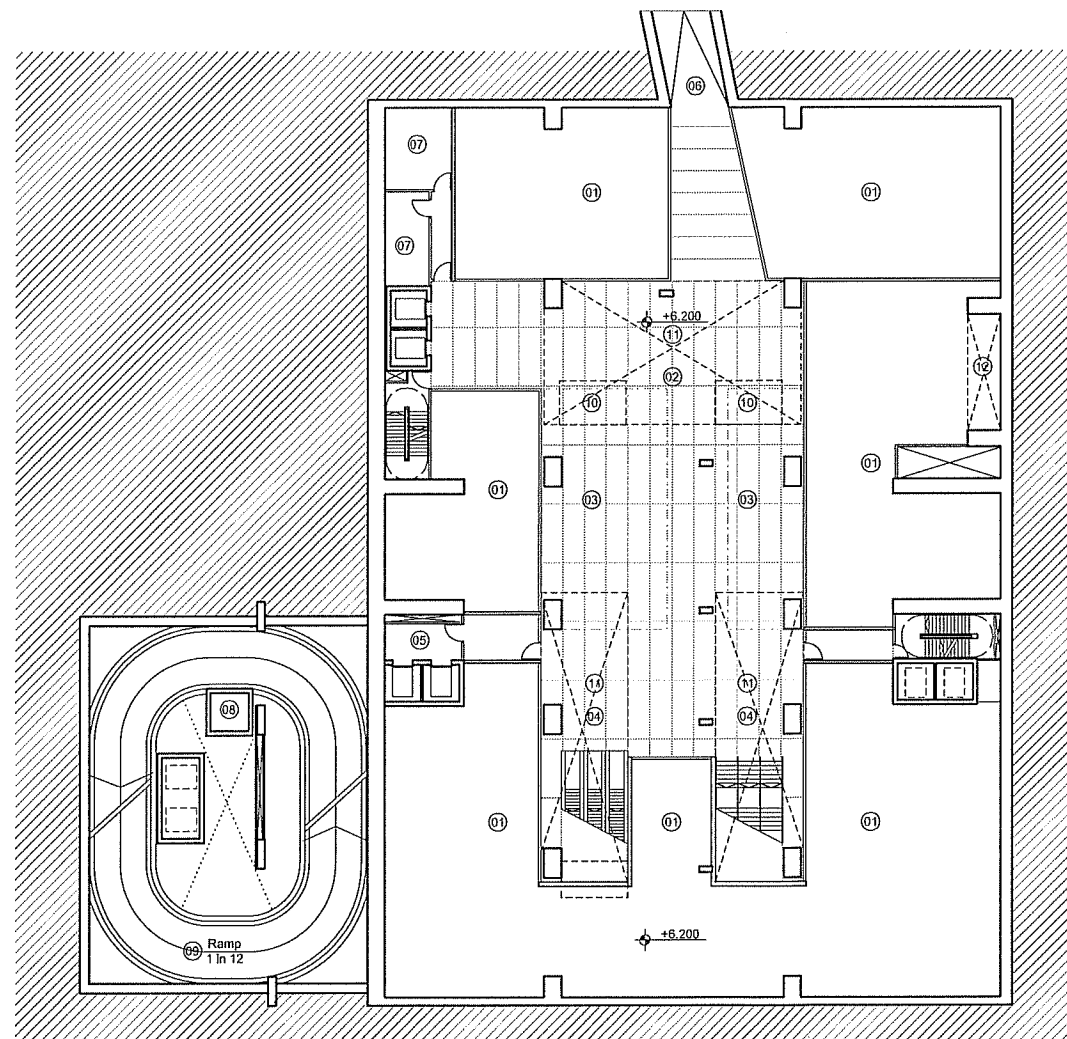
project no m: 958 a: 120298.00

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Dimensions govern.

- 01: Retail
02: Concourse
03: Market place
04: To Station Concourse level
05: Retail goods lifts to Loading Bay
06: To Hunter connection
07: Public Toilets
08: Shell House Goods Lift Pit
09: Ramp to Basement Carpark
10: Escalator pit above
11: Void above
12: Riser above

[illegible]

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project **One Carrington Street**

drawing **Hunter Connection Level**

scale	1 : 250	status	drawing no.
		PDA2004	
drawn			
paper size	A1		
checked	MC/PS/IL	issue	
project no	m: 958 a: 120298.00	Rev 00	

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Note:
285 George Street spot heights in abeyance (awaiting survey).

-

[illegible]

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Note:
285 George Street spot heights in abeyance (awaiting survey).

- 01: Concourse
- 02: Retail
- 03: Office Lobby
- 04: Dock Manager
- 05: Waste
- 06: Approach to retail outside of demise
- 07: Loading Bay
- 08: Retail Goods lifts to Hunter Concourse
- 09: Retail Passenger lifts to Hunter Concourse
- 10: 285 Lifts
- 11: Ramp to Basement
- 12: Shell House goods lift
- 13: Courier Parking
- 14: Store
- 15: Plant / Services
- 16: Route for Couriers
- 17: Information Point
- 18: Security Line
- 19: Tower Goods Lifts
- 20: Access to Wynyard Lane
- 21: Service route below Wynyard Lane (above concourse soffits)
- 22: Void below
- 23: Retail carpark outside of demise
- 24: Retail on to Wynyard Lane above
- 25: Platform Lift
- 26: Retail BOH

[illegible]

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drawing

George Street Level

Shell House George Street Level

285 George Street Level

scale	1 : 250	status	drawing no.
drawn			PDA2006
paper size	A1		

checked _____ Issue _____
MC/PS/IL
project no _____ Rev 00
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