## Design for a better *future /*



WESTFIELD HURSTVILLE ROOFTOP DINING, ENTERTAINMENT & LEISURE PRECINCT EXTENSION WASTE MANAGEMENT PLAN



## Question today Imagine tomorrow Create for the future

#### WESTFIELD HURSTVILLE ROOFTOP DINING, ENTERTAINMENT & LEISURE PRECINCT EXTENSION Waste Management Plan

WSP Level 27, 680 George Street Sydney NSW 2000 GPO Box 5394 Sydney NSW 2001

Tel: +61 2 9272 5100 Fax: +61 2 9272 5101 wsp.com

REV	DATE	DETAILS
А	29/05/2020	Draft Waste Management Plan
В	09/06/2020	Waste Management Plan
С	26/06/2020	Waste Management Plan
D	06/05/2021	Waste Management Plan (Response to Council RFIs)

	NAME	DATE	SIGNATURE
Prepared by:	Laurence Gamble	06/05/2021	thank
Reviewed by:	Valentina Petrone	06/05/2021	blowtuckhone
Approved by:	Valentina Petrone	06/05/2021	blowtickhow

This document may contain confidential and legally privileged information, neither of which are intended to be waived, and must be used only for its intended purpose. Any unauthorised copying, dissemination or use in any form or by any means other than by the addressee, is strictly prohibited. If you have received this document in error or by any means other than as authorised addressee, please notify us immediately and we will arrange for its return to us.

# wsp

## TABLE OF CONTENTS

1	SUMMARY1
2	INTRODUCTION
2.1	LAND USE
3	RESPONSE TO COUNCIL RFIS
4	OPERATIONAL WASTE4
4.1	WASTE GENERATION 4
<b>4.2</b> .1 4.2.2 4.2.3	WASTE SYSTEMS5GARBAGE, COMMINGLED RECYCLING, CARDBOARD5FOOD ORGANICS6ADDITIONAL WASTE STREAMS6
4.3	INTERNAL WASTE TRANSFER & HANDLING7
4.4	EQUIPMENT QUANTITY, SIZE AND COLLECTION FREQUENCY
4.4.1 4.4.2 4.4.3	EXISTING CONDITIONS (LOADING DOCK 1)
4.5	BIN COLOUR AND SUPPLIER9
4.6	SIGNAGE9
4.7	WASTE COLLECTION METHODOLOGY 10
<b>4.8</b> 4.8.1 4.8.2	ADDITIONAL INFORMATION10HIGH LEVEL PURCHASING SCHEDULE10SUPPLIER CONTACT INFORMATION11
5	CONSTRUCTION AND DEMOLITION WASTE12

#### LIST OF APPENDICES

SCALED WASTE ROOM DRAWINGS

# wsp

## List of Figures

FIGURE 1	EXAMPLE BIN STATION APPLICATION
FIGURE 1	EXAMPLE FOOD ORGANICS EQUIPMENT 6
FIGURE 2	NSW EPA WASTE MANAGEMENT SIGNAGE

### List of Tables

TABLE 1	WASTE COLLECTION SUMMARY (PROPOSED	
	CONDITIONS)	1
TABLE 2	DEVELOPMENT SUMMARY	2
TABLE 1	RESPONSES TO PLANNING PERMIT CONDITIONS	3
TABLE 2	WASTE GENERATION RATES	4
TABLE 3	WASTE GENERATION ASSESSMENT	4
TABLE 4	WASTE COLLECTION SUMMARY (EXISTING	
	CONDITIONS)	7
TABLE 5	WASTE COLLECTION SUMMARY (PROPOSED	
	CONDITIONS)	8
TABLE 6	TYPICAL EQUIPMENT DIMENSIONS	8
TABLE 7	WASTE COLLECTION SUMMARY (PROPOSED	
	CONDITIONS)	10
TABLE 8	EQUIPMENT SUPPLY SCHEDULE	10
TABLE 9	SUPPLIER CONTACT LIST	11

### 1 SUMMARY

The below is a summary of the waste management strategy proposed for the subject site. The complete report must be read in detail prior to implementing the waste management plan.

The Rooftop Dining & Entertainment and Leisure Precinct (ELP) of the Westfield Hurstville shopping centre (located at Park Road, Hurstville) proposes the following modifications to the existing structure:

- Partial demolition of existing retail floor space at Level P5.
- Construction of a new ELP, providing a range of new restaurant, retail and entertainment tenancies across Level P3 through Level P6.

Waste volumes generated throughout the ELP facilities will generally be managed through the existing equipment of Loading Dock 1, with the additional waste volumes generated through ELP operations anticipated to modify existing collection arrangements as follows:

- Up to one additional garbage compactor collection undertaken per week.
- Up to two additional 660L recycling bins (i.e. up to 15 x 660L bins) serviced per collection.
- Up to one additional cardboard compactor collection undertaken per week.

In addition, a new food digester will be provided at Level P5 specifically in service of the ELP tenancies. The digester will have no impact on Loading Dock 1, given these units decompose organic matter into a product of just  $CO_2$  and greywater (i.e. no residual waste bins for organic material required for collection). The existing waste drop off room at Level P5 (currently used for 240L/ 660L bin storage) will be repurposed as a digester storeroom, accessible by each of the ELP tenancies as required (refer Appendix A).

Waste Collection Summary (Proposed Conditions)				
Location         Waste Equipment         Collections per Week         Collection Operator				
Garbage	1 x 23m <sup>3</sup> Compactor	(Up to) Fiver times per week	Private Contractor	
Recycling	(Up to) 15 x 660L Bins	Four times per week	Private Contractor	
Cardboard	1 x 32m <sup>3</sup> Compactor	(Up to) Three times per week	Private Contractor	
Food Organics	1 x Digester (1000kg/day capacity)	n/a	Not Required	

#### Table 1 Waste Collection Summary (Proposed Conditions)

All waste equipment of Loading Dock 1 (compactors, bins, etc.) will continue to be collected onsite directly from the dock, as per current practice.

None of the changes proposed to the loading dock (such as the new grease arrestors) will have any bearing on the waste systems outlined in this report. No **functional** modifications to the position, layout or access arrangement of the loading dock are proposed under the subject development.

## 2 INTRODUCTION

The following Waste Management Plan has been prepared for the proposed Rooftop Dining & Entertainment and Leisure Precinct (ELP) Expansion at the Westfield Hurstville shopping centre located at Park Road, Hurstville.

This Waste Management Plan (WMP) and the waste generation rates therein have been prepared based on the Hurstville Development Control Plan 2018 (Amendment 7, Appendix 1), current best practice waste management methodology, and technologies commonly available in Australia.

#### 2.1 LAND USE

Client:Scentre GroupTown Planning Application:DA 2020/0425Land Use Type:Retail (Shopping Centre)

#### Table 2 Development Summary

Use	Identifier Code	GLA + LSA: To Be Demolished	GLA + LSA: To Be Constructed
Restaurants (Existing)	PAV A – PAV E	-623m <sup>2</sup>	-
SUBTOTAL – EXISTING FACILITIES		-623m <sup>2</sup>	-
Restaurant	R01 – R06, EX PAV A	-	+1,860m <sup>2</sup>
Food Stall	F01 - F08	-	+310m <sup>2</sup>
Entertainment	S01 – S02	-	+1,120m <sup>2</sup>
SUB	TOTAL – NEW FACILITIES	-	+ <b>3,290m</b> <sup>2</sup>

## 3 **RESPONSE TO COUNCIL RFIs**

Council issued a number of RFIs in response to WSP's previously prepared Waste Management Plan (*PS119912-20200626-Waste Management Plan-001 RevC*, dated 26 June 2020), submitted to Council under DA 2020/0425. RFIs have been replicated in full below.

This updated Waste Management Plan addresses each of these RFIs as per the below.

Table 1	Responses to	o Planning	Permit	Conditions

DA 2020/0425 Condition	WMP Response
<i>1. Waste</i> <i>Council's waste team have reviewed the proposal and request</i> <i>that the following clarifications be provided to ensure that</i>	This Waste Management Plan has been revised with respect to Council's comments, as per the below.
waste for the ongoing use component of the proposal is appropriately managed.	
• Clarification as how wastes (general waste, commingled recycling, garden organics and bulky waste materials) will be transported to the central storage areas from each unit, ahead of collection;	Further detail of internal waste transfer and handling is provided in Section 4.3.
• Revised architectural plans that outline where and the size of litter/recycling bins will be located throughout the extension to adequately collect the material and prevent it from becoming wind-blown litter;	Further detail of litter bin size and management is provided in Section 4.2.1. The architectural drawings of Appendix A have been updated to include litter bin positions.
• Revised architectural plans that illustrate the location of the digester on the scaled drawings – noting that the WMP outlines a Digester will be installed at the Level P5 waste drop off room, however this is not supported on any provided scaled plans within the WMP Appendix;	The architectural drawings of Appendix A have been updated to include the food digester.
• The WMP makes reference in-text that there will be no changes to the storage within the Loading Dock 1 – however, in the WMP Appendix files, the scaled drawings include annotations for new grease arrestors. The applicant should confirm if changes are being made to Loading Dock 1 and ensure that the information on the scaled drawings corresponds with the information within the WMP plan.	There will be no <b>functional</b> change in loading dock storage from an operational waste perspective. Any changes to loading dock layout (i.e. new grease arrestors) will not have any bearing on the waste systems outlined in this report. Collection methodology of Section 4.7 has been updated to reflect this.

## 4 OPERATIONAL WASTE

#### 4.1 WASTE GENERATION

Waste generation rates adopted throughout analysis per week are shown in Table 2. Rates associated with Entertainment use have been sourced through the City of Sydney document *Guidelines for Waste Management in New Developments* (2019) and all other rates through the NSW EPA document *Better Practice Guide for Resource Recovery* (2019).

As per direction from the project team, allowances have been made for the below tenancies to operate as follows:

- The new R04 restaurant tenancy to operate as a café.
- The new R05 restaurant tenancy to operate as a tavern.
- The new food stalls (F01 F08) to operate as takeaway food (kiosks) only, with no provision for in-tenancy dining.

Any areas considered ancillary to the active uses of the site (circulation, back of house, etc.) are not considered to generate additional waste, and as such are not included in the areas shown below. Waste generated by these areas is created in service of the active uses of the site and is therefore incorporated into the rates shown below.

Use	Garbage (L/week)	Recycling (L/week)	Cardboard (L/week)	Food Organics (L/week)
Restaurant	1,400	760	1,200	1,400
Café	350	240	600	350
Tavern (Restaurant)	1,400	760	1,200	1,400
Takeaway (Kiosk)	525	125	400	525
Entertainment	700	435	440	210

#### Table 2 Waste Generation Rates

A waste generation assessment prepared in accordance with the above rates is provided in Table 3 below. Noting the communal use of waste equipment across the site (i.e. waste equipment to be shared between ELP and non-ELP tenancies), the below assessment concerns the **change** in waste volumes anticipated across. Further detail is provided in Section 4.4.1.

#### Table 3 Waste Generation Assessment

Use	Quantity / Area	Garbage (L/week)	Recycling (L/week)	Cardboard (L/week	Food Organics (L/week)
Existing Restaurants	-623m <sup>2</sup>	-8,722	-4,735	-7,476	-8,722
SUBTOTAL – EXISTIN	G FACILITIES	-8,722	-4,735	-7,476	-8,722
Restaurant	825m <sup>2</sup>	+11,550	+6,270	+9,900	+11,550
Café	130m <sup>2</sup>	+455	+312	+780	+455
Tavern (Restaurant)	905m <sup>2</sup>	+12,670	+6,878	+10,860	+12,670
Takeaway (Kiosk)	310m <sup>2</sup>	+1,628	+388	+1,240	+1,628
Entertainment	1,120m <sup>2</sup>	+7,840	+4,872	+4,928	+2,352
SUBTOTAL – NEW FACILITIES		+34,143	+18,720	+27,708	+28,655
	NET CHANGE	+25,421	+13,985	+20,232	+19,933

#### 4.2 WASTE SYSTEMS

Waste shall be sorted on-site by tenants as appropriate into the following streams:

- Garbage (General Waste)
- Commingled Recycling
- Cardboard
- Food Organics
- Additional Waste Streams, including:
  - Soft Plastics
  - Cooking Oil
  - Bulk Waste

#### 4.2.1 GARBAGE, COMMINGLED RECYCLING, CARDBOARD

#### PUBLIC PLACE (LITTER) BINS

The ELP tenancy will be fitted with public place (litter) bins for the temporary holding of waste throughout any circulation, lobby or equivalent areas. Public place bin sets should always feature two bins in tandem (one garbage, one recycling), as to best promote waste stream separation.

The ELP will adopt Westfield Hurstville's standard litter bin sizes and types, to be incorporated into fitout as per Westfield Hurstville's design standards. Public place bin locations are shown in Appendix A.

#### TENANCY WASTE

Each ELP tenancy will be fitted with bins for the temporary holding of waste as deemed appropriate by tenancy management, to be provided within both front of house and back of house areas as necessary. Bin position, size and capacity will be provided in accordance with the specific fitout requirements of each tenant and Westfield Hurstville's standard operating procedure.

Tenants will transfer waste from these bins directly to Loading Dock 1 at Level P0 for disposal (see Appendix A), with waste to be disposed of either within the garbage compactor, cardboard compactor or recycling drop off bins provided therein.



#### Figure 1 Example Bin Station Application

*Typical Internal Bin Fitout (Tenancy BoH)* 



Typical Public Place Bins

#### 4.2.2 FOOD ORGANICS

#### FOOD DIGESTER

An aerobic digester unit will be used for the processing of food waste generated throughout the ELP tenancies. The existing waste drop off room at Level P5 (currently used for 240L/ 660L bin storage) will be repurposed as a digester storeroom, accessible by each of the ELP tenancies as required (refer Appendix A).

Digesters utilise natural microorganisms and the presence of oxygen to decompose organic substances. The microorganisms feed on the organic substances within the digester unit, decomposing them into a product of just CO<sub>2</sub> and greywater (with no residual food waste). As such, no residual waste bins for organic material will be required for collection. Any greywater discharge is stable and permitted to be discharged into the local sewerage network.

At the time of which this report is dated, digesters are required to be registered with the local water authority as part of the trade waste agreement for the development.

#### DISPOSAL METHODOLOGY

ELP tenancies shall be furnished with plastic tubs (typically 20L in size) for the temporary holding of organic waste. These plastic tubs will be stored within the respective back of house areas of each tenant. Tubs can be stacked and transferred via trolleys if desired (see Figure 1 overleaf).

Tenants will manually empty organic waste from these bins directly into the digester unit as required (see Appendix A). Organic waste is to be disposed of loosely into the digester.

#### Figure 1 Example Food Organics Equipment



Example Food Digester (ORCA model shown)



Example Organcis Trolley

#### 4.2.3 ADDITIONAL WASTE STREAMS

WSP understands that the separation of a number of additional waste streams is currently allowed for within Loading Dock 1, including (but not limited to):

- Soft Plastics
- Cooking Oil
- Bulk Waste

These waste streams will continue to be separated and disposed of within the dock as deemed suitable by management. The subject development is not anticipated to introduce any significant modifications to the equipment used to manage these additional waste streams.

#### 4.3 INTERNAL WASTE TRANSFER & HANDLING

The existing goods lift will provide a direct path of travel between each ELP level and Loading Dock 1 for cleaning staff / tenants as required (refer Appendix A).

Waste movements between the ELP levels and Loading Dock 1 will generally be undertaken as follows:

- Public Place Bins: Cleaning staff to circulate throughout the ELP levels and decant waste from the public place bins into cleaners trolleys or small wheelie bins at nominated service times each day. Once full, trolleys / bins will be transferred to Loading Dock 1 and further decanted into the larger compactors / bins as appropriate.
  - Note: Public place bins to be cleared in accordance with Westfield Hurstville's standard operations.
- **Tenancy Waste**: Tenancy staff will likely transfer bagged waste from their respective tenancies to Loading Dock 1 for disposal directly within the larger compactors / bins as appropriate

All waste transfer paths are to be exclusively within the site title boundary and do not require cleaners/tenants to exit title to perform operations. Transfer routes for waste collections do not include stairs.

Waste handling and equipment use will be limited to trained staff, as per Westfield Hurstville's standard operational procedure.

Garbage waste is to be disposed of bagged, and all other waste streams are to be disposed of loosely. Any plastic bin liners are to be disposed of as soft plastics / garbage as appropriate.

#### 4.4 EQUIPMENT QUANTITY, SIZE AND COLLECTION FREQUENCY

#### 4.4.1 EXISTING CONDITIONS (LOADING DOCK 1)

A summary of **existing** waste equipment (and associated collection frequencies) used and maintained within Loading Dock 1 is provided in Table 4 below. Note that the below volumes are as per those generated under **peak** operating conditions of the wider shopping centre.

The weekly waste volumes shown assume that all bins and/or compactors are filled to 100% capacity at the time of collection. This provides for a highly conservative waste generation estimate.

A 3:1 compaction ratio has been assumed for both the garbage and cardboard compactors. WSP notes that higher compaction ratios can be achieved under certain conditions.

Table 4	Waste Collection Summary (Existing Conditions)
---------	--

Waste Collection Summary (Existing Conditions)						
Location	Equipment         Collections per Week         Weekly Capacity         Weekly					
Garbage	1 x 23m <sup>3</sup> Compactor	4	276,000L	276,000L		
Recycling	(Up to) 13 x 660L Bins	4	25,080L	25,080L*		
Cardboard	1 x 32m <sup>3</sup> Compactor	2	192,000L	192,000L		
Food Organics	(Up to) 7 x 240L Bins	3	4,080L	4,080L		

\* Volume shown reflects a count of weekly bin tips.

#### 4.4.2 PROPOSED CONDITIONS

With consideration for the additional waste volumes to be generated by the ELP Extension, a summary of proposed waste equipment (and associated collection frequencies) is provided in Table 5 below. Potential changes to the existing waste system previously detailed are as follows:

- Up to one additional garbage compactor collection undertaken per week.
- Up to two additional 660L recycling bins (i.e. up to 15 x 660L bins) serviced per collection.
- Up to one additional cardboard compactor collection undertaken per week.
- Installation of one new digester unit for the management of food organics (limited to use by ELP tenants only).
   Note: 240L bins for food organics will continue to be provided within Loading Dock 1 for use by non-ELP tenancies.

Noting the variance between weekly capacities and generated volumes, the below collection frequencies and equipment quantities are intended as upper limiting values. In actual practice, from time to time lesser collection frequencies / equipment quantities to that listed below may be required.

Waste Collection Summary (Proposed Conditions)						
Location	n Waste Equipment Collections per Week Weekly Capacity Weekly Volum					
Garbage	1 x 23m <sup>3</sup> Compactor	( <b>Up to</b> ) 5	345,000L	301,421L		
Recycling	( <b>Up to</b> ) 15 x 660L Bins	4	39,600L	39,065L		
Cardboard	1 x 32m <sup>3</sup> Compactor	( <b>Up to</b> ) 3	288,000L	212,232L		
Food Organics	1 x Digester (1000kg/day capacity)	n/a	27,000L	28,655L**		

 Table 5
 Waste Collection Summary (Proposed Conditions)

\* Garbage, recycling and cardboard volumes shown include those generated under the ELP Extension works, inclusive of additional site uses. Food organics volume shown represents that generated by ELP Extension tenancies <u>only</u>.

\*\* It is noted that the anticipated organics volume exceeds digester capacity. Any minor surplus of food organics can be disposed of as garbage if need be.

#### 4.4.3 EQUIPMENT SIES

Table 6 outlines typical dimensions for the waste equipment required across the development. Note that the dimensions provided are approximate only and must be confirmed with the supplier prior to development.

#### Table 6 Typical Equipment Dimensions

Typical Equipment Dimensions (mm)				
Unit Width Depth Height				
660L Bin	1250	780	1330	
Food Digester (1000kg/day)	2740	900	1245	

#### 4.5 BIN COLOUR AND SUPPLIER

Australian Standard AS4123.7 2006 specifies the following bin colours, however due the private nature of waste collection these are only recommendations and are not mandatory:

- Garbage (general waste) bins shall have red lids with dark green or black body.
- Recycle bins shall have yellow lids with dark green or black body.
- Cardboard bins shall have blue with dark green or black body.
- Food organics bins shall have shall have burgundy lids with dark green or black body.

Private collection contractors often supply their own bins for collection.

#### 4.6 SIGNAGE

Waste storage areas and bins will be clearly marked and signed with the standard Westfield signage or equivalent (such as shown in Figure 2).

Commercial tenants will be instructed by building management to adhere to these requirements.

#### Figure 2 NSW EPA Waste Management Signage



#### 4.7 WASTE COLLECTION METHODOLOGY

Waste volumes generated through ELP operations are anticipated to result in the following changes to the collection operations of Loading Dock 1:

- Up to one additional garbage compactor collection undertaken per week.
- Up to two additional 660L recycling bins (i.e. up to 15 x 660L bins) serviced per collection.
- Up to one additional cardboard compactor collection undertaken per week.

In addition, a new food digester will be provided at Level P5 specifically in service of the ELP tenancies. The digester will have no impact on Loading Dock 1, given these units decompose organic matter into a product of just  $CO_2$  and greywater (i.e. no residual waste bins for organic material required for collection).

Waste Collection Summary (Proposed Conditions)					
Location	Equipment         Collections per Week         Collection Operator				
Garbage	1 x 23m <sup>3</sup> Compactor	(Up to) Fiver times per week	Private Contractor		
Recycling	(Up to) 15 x 660L Bins	Four times per week	Private Contractor		
Cardboard	1 x 32m <sup>3</sup> Compactor	(Up to) Three times per week	Private Contractor		
Food Organics	1 x Digester (1000kg/day capacity)	n/a	Not Required		

Table 7 Waste Collection Summary (Proposed Conditions)

All waste equipment of Loading Dock 1 (compactors, bins, etc.) will continue to be collected onsite directly from the dock, as per current practice.

None of the changes proposed to the loading dock (such as the new grease arrestors) will have any bearing on the waste systems outlined in this report. No **functional** modifications to the position, layout or access arrangement of the loading dock are proposed under the subject development.

#### 4.8 ADDITIONAL INFORMATION

#### 4.8.1 HIGH LEVEL PURCHASING SCHEDULE

Table 8 lists the <u>new</u> waste equipment required for the development under the conditions proposed within this report. A complimentary list of suppliers is provided for convenience.

 Table 8
 Equipment Supply Schedule

Item	Quantity / Notes	Typical Services Requirement(s)*	Supplier	
660L Bin	2 No. Recycling	nil	Private Supplier (SULO or equivalent)	
Food Digester	Power: 240V 10A per unit1 No. 1000kg/day capacityRegular maintenance required <i>Drain</i> : Min. 3'' sanitary drain connection (via grease trap to authority requirement)		Private Supplier (ORCA or equivalent)	
* Services requirements are indicative only and must be confirmed with the manufacture prior to commencement of construction				

#### 4.8.2 SUPPLIER CONTACT INFORMATION

A complimentary listing of equipment suppliers is provided in Table 9 below for your reference. You are not obligated to procure goods/services from these companies. This is not, nor is it intended to be, a complete list of available suppliers. WSP does not warrant (or make representations for) the goods/services provided by these suppliers.

Service Type	Contractor / Supplier Name	Phone	Website
	ORCA (Food Digesters)	1855 355 6722	www.feedtheorca.com
Equipment Suppliers	PowerKnot (Food Digesters)	(02) 6627 6360	www.powerknot.com
	Sulo Australia (Bins)	1300 364 388	www.sulo.com.au

Table 9 Supplier Contact List

## 5 CONSTRUCTION AND DEMOLITION WASTE

A Construction and Demolition (C&D) Waste Management Plan will be prepared as a separate document by the appointed building contractor prior to the commencement of construction works, to be prepared in accordance with Hurstville Development Control Plan 2018.

In addition to details regarding material separation, collection and handling, the C&D Waste Management Plan will detail the following items:

- Estimated volumes generated according to type throughout the construction and demolition processes.
- Information about reuse, recycling and disposal options for all types of waste produced on site during construction or demolition activities.
- Information on how the WMP will be implemented throughout the development, construction and demolition use of the development.

# **APPENDIX A** SCALED WASTE ROOM DRAWINGS











Project No.

4639

Drawing No.

01.1005

Β



6200	14. 2600	8800	(15A) 6900	(16A) 7100	(17.) (17A 2500	6500	18 4750 4 4 7 4	20 600	
	 _						BOUNDARY		(
SITION									(
   								BOUNDARY	(
PASSENGER LIFT: UNDANT. REMOVI									
QUIPMENT & BLO OPENING	ск								
									(
				ex FIRE CORRIDOR	İİ				
				â					(
					ļ				
									(
					+			+	(
									(
			- <del> </del>		+			+	(
									(
									(
								BOUNDARY	,
			_ +	<b> </b>					(
						BOUNDARY			
						BOUNDARY			(
	 		 						(
	(14)	(15)	(16)		(17)				

1 GEN	ERAL LEGEND
<ul><li>⊕ FFL XX.XXXX</li><li>⊕ SFL XX.XXXX</li></ul>	- GENERAL REDUCED LEVEL - FINISHED FLOOR LEVEL - STRUCTURAL FLOOR LEVEL - FINISHED CEILING LEVEL
XXXX - DOO	R TAG. REFER TO DOOR SCHEDULE
	./ROOF TAG. REFER TO TYPE SCHEDULES IT OF PLASTERBOARD ABOVE SFL
XXX _ s	STEP DOWN
<u> </u>	DIRECTION OF FALL / GRADIENT
ACC - ACCESS AHU - AIR HAN BO - BOLLAR BT - BUCKET CE - CARPAR COS - CHECK / CJ - CONSTR CS - CARPAR DB - DISTRIBI DJ - DOWEL DP - DOWNPII EJ - EXPANS FD - FOOD PF FH - FIRE HO FW - FLOOR M GA - GREASE GD - GRATED GM - GAS ME LDE - LOADING LP - LIGHT P MDF - MAIN DI: MH - MANHOL MSB - MAIN SV OA - OUTSIDE OF - RAINWA RA - RETURN RS - ROLLER RWO - RAINWA	IDLING UNIT D TRAP K EXHAUST CONFIRM ON SITE UCTION JOINT K SUPPLY AIR JTION BOARD JOINT PE ION JOINT ROVISIONED TENANCY DRANT SE REEL VASTE ARRESTOR DRAIN TER/S i DOCK EXHAUST OLE STRIBUTION FRAME E VITCH BOARD AIR TER OVERFLOW AIR SHUTTER TER OUTLET C DOWNPIPE
STV – STACK SWP – STORMW TB – TROLLEY	VENT VATER PIT Y BAY
TD - TUNDISH TE - TOILET TBC - TO BE C VP - VENT PI VJ - VERTICA WM - WATER WS - WHEEL	EXHAUST IONFIRMED PE IL JOINT METER/S
S REFER T	LOCATION OF TENANT SERVICES. O 08.3 MASTER LEASE PLANS FOR Y NUMBERS AND TENANCY PROVISION LE FOR SERVICE PROVISIONS

\_\_\_\_\_

W	ALL TYPE LEGEND
BLOCK WAL	LS
BK 1.40	140mm HOLLOW CORE BLOCKWORK
(BK 1.40FR)	140mm HOLLOW CORE BLOCKWORK FIRE RATED TO FRL -/120/120
(BK 1.40CF)	140mm CORE FILLED & REINFORCED BLOCKWORK
<u>BK 1.41</u>	140mm HOLLOW CORE BLOCKWORK RENDERED ON 1 SIDE
(BK 1.41FR)	140mm HOLLOW CORE BLOCKWORK FIRE RATED TO FRL -/120/120 RENDERED ON 1 SIDE
(BK 1.90)	190mm HOLLOW CORE BLOCKWORK
(BK 1.90FR)	190mm HOLLOW CORE BLOCKWORK FIRE RATED TO FRL -/120/120
(BK 1.90CF)	190mm CORE FILLED & REINFORCED BLOCKWORK
<u> </u>	190mm HOLLOW CORE BLOCKWORK RENDERED ON 1 SIDE
	190mm HOLLOW CORE BLOCKWORK FIRE RATED TO FRL -/120/120 RENDERED ON 1 SIDE
PLASTERBO	ARD WALLS
	NOMINAL 92mm STUD FRAMED WALL WITH SINGLE 13mm PLASTERBOARD LAYER TO 1 SIDE
(PB 0.91) N S	NOMINAL 92mm STUD FRAMED WALL WITH INGLE 13mm PLASTERBOARD LAYER TO
$\langle PB 0.91FR \rangle$	OTH SIDES NOMINAL 92mm STUD FRAMED WALL WITH DOUBLE LAYER 16mm FIRE RATED PLASTERBOARD TO BOTH SIDES
1	NOMINAL 92mm STUD (450 CTRS) FRAME WITH 7mm STRUCTURAL PLY & 13mm PLASTERBOARD AYER TO 1 SIDE
s 1 1	IOMINAL 92mm STUD FRAMED WALL WITH SL72 REINFORCEMENT MESH TO SIDE 1 (MAJOR FENANT SIDE). 3mm PLASTERBOARD LAYER TO BOTH SIDES. WOOLWORTHS INTER-TENANCY WALL)
1 V P F	NOMINAL 92mm STUD (450 CTRS) FRAME WITH 2mm STRUCTURAL PLY TO INSIDE FACE LINED VITH 13mm AQUACHEK PLASTERBOARD. 13mm PLASTERBOARD TO OUTER FACE. SOUNDSCREEN X2.5 ACOUSTIC INSULATION BETWEEN STUDS. PLANT ROOM WALLS)
[	NOMINAL 150mm STUD FRAMED WALL WITH DOUBLE LAYER 16mm FIRE RATED PLASTERBOARD TO BOTH SIDES
F F	NOMINAL 150mm STUD FRAMED WALL WITH DOUBLE LAYER 16mm FIRE RATED 2LASTERBOARD TO BOTH SIDES & SL72 REINFORCEMENT MESH & TO SIDE 1 (MAJOR 2ENANT SIDE). (BIG W INTER-TENANCY WALL)
F M S	EASONED 140x45 F7 TIMBER STUD (450 CTRS) RAMED WALL WITH SL72 REINFORCEMENT IESH & 17mm STRUCTURAL PLY COVERING TO IDE 1 (MAJOR TENANT SIDE). 13mm LASTERBOARD LAYER TO BOTH SIDES. BIG W INTER-TENANCY WALL)
۲ ۲ ۱	EASONED 140x45 F7 TIMBER STUD (450 CTRS) RAMED WALL WITH SL82 REINFORCEMENT MESH & 13mm PLASTERBOARD LINING TO BOTH SIDES. PROVIDE ROW OF FLUSH FACED NOGGINGS AT 2100mm ABOVE FLOOR LEVEL. KMART INTER-TENANCY WALL
FIBRE CEME	NT WALLS
<pre> FC 0.90 </pre>	NOMINAL 92mm STUD FRAMED WALL WITH DIRECT FIXED 9mm C.F.C LAYER TO 1 SIDE NOMINAL 92mm STUD FRAMED WALL WITH DIRECT FIXED 9mm C.F.C LAYER TO SIDE 1 & 13mm PLASTERBOARD TO SIDE 2
< <u>FC 0.91A</u>	NOMINAL 92mm STUD FRAMED WALL WITH DIRECT FIXED 9mm C.F.C LAYER TO SIDE 1 & 13mm ACOUSTIC PLASTERBOARD TO SIDE 2 WITH ACOUSTIC INSULATION



