

LOGOS Development Management Pty Ltd

Waste Management Plan

Sydney Flight Training Centre 28-30 Burrows Road, St Peters, NSW

> 26 October 2022 63126/147078 (Rev 4) JBS&G Australia Pty Ltd

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1. Introduction

JBS&G Australia Pty Ltd (JBS&G) was engaged by LOGOS Development Management Pty Ltd (Logos, the client) to prepare a Waste Management Plan (WMP) for the redevelopment of 28-30 Burrows Road, St Peters NSW (the site). The site is currently occupied by existing industrial warehouse buildings and a hardstand area for deliveries and car parking. The site is legally identified as Lot 2 in Deposited Plan (DP) 212652 and Lot 15 in DP 32332 and occupies a total area of 7,961 m². The site location and site layout are provided in **Figure 1** and **Figure 2**, respectively.

JBS&G understand that the site is proposed to be used for the construction of the Sydney Flight Training Centre.

The proposed facility enables pilots and flight crews to undertake periodic testing to meet regulatory requirements by simulating in both aircraft and emergency procedural environments. The project seeks consent for the construction and operation of the new flight training centre.

1.1 Scope

This WMP has been developed to address the Secretary's Environmental Assessment Requirements (SEARs) issued by the NSW Department of Planning and Environment for the project 'Sydney Flight Training Centre' (SSD Reference No. SSD-47601708) dated 12 September 2022. **Table 1.1** presents the SEARs required to be addressed to support the project:

Key Issue	Requirement	Relevant Section of Report
Waste	Details of the quantities and classification of all waste streams to be generated onsite during the construction and operations.	Waste streams associated with the construction phase of the project are presented in Section 4 .
	Details of waste storage, handling, and disposal requirements in accordance with the City of Sydney Guidelines for Waste Management in New Developments.	Hazardous material handling, transport and disposal requirements are detailed in Section 4 and Section 5 .

JBS&G has been advised that the demolition of the existing buildings and structures will be undertaken in accordance with a separate Complying Development Certificate.

In accordance with the SEARs listed above, the scope of this WMP is to address the likely waste streams generated during the works, provide indicative estimations of waste quantities, and propose management, reuse, recycling and disposal procedures during the excavation, construction and operational works of the redevelopment works within the subject site.

1.2 Objectives

The key objective of this WMP is to support the client in their project through identifying the types and quantities of potential waste streams and to establish management measures to prevent environmental harm, minimise waste and maximise resource preservation.

This WMP specifically aims to:

- Address the SEARs for waste;
- Promote waste minimisation through avoiding and reducing waste generation;
- Comply with legislation and adhere to waste minimisation guidance and standards;
- Apply the waste management hierarchy (Section 3.3) throughout construction; and
- Specify safe and appropriate management of potentially contaminated wastes.



2. Project Description

As mentioned previously, 28-30 Burrows Road, St Peter is currently an industrial site, containing warehouses and a carpark area. Planned works will result in further industrial use as the site is planned to include a three-storey warehouse building for the purposes of a flight training centre once construction is complete.

2.1 Location and Site Layout

Information relating to the site are provided in **Table 2.1** below. The site location is illustrated in **Figure 1.**

Site address	28-30 Burrows Road, St Peters NSW 2044	
Lot	Lot 2 DP 212652 and Lot 15 DP32332	
Local Government	City of Sydney Council	
Zoning	IN1 – General Industrial Local Environmental Plan (LEP) 2012	
Surrounding Land Use	The site is located within an area largely surrounded by other industrial buildings.	
Estimated Construction Dates	circa 1955	

Table 2.1: Site Details

2.2 Site Description

The site comprised a rectangular parcel of land used for industrial purposes was divided into two properties, 28 Burrows Road and 30 Burrows Road, which are discussed below.

The 28 Burrow Road site contained a large warehouse (QMS Australia) in the western portion of the property with access from Burrows Road to the north. The warehouse was used as an outdoor furniture repair workshop and depot. The southern portion of the warehouse was previously used as a spray-booth but was used for the storage of outdoor furniture at the time of inspection. A disused truck wash was also present along the eastern boundary of the property and was being used as undercover storage for outdoor furniture stock.

A sump pit (previously used for waste oil storage) was located in the south-western portion of the property. The sump was in good condition with no evident cracking. Oil staining was present at the base of the sump.

A sewer pump, oil water separator and pit were located in the south-eastern portion of the property. The oil water separator and pit were not in use as part of current site operations but were noted to contained residual water with a hydrocarbon odour and sheen.

The ground surface of 28 Burrows Road was mostly covered in hardstand on which there were no obvious signs of gross contamination. Fill points and vent pipes present on site indicate the presence of five underground storage tanks (USTs) onsite in the northern and southern portions of site. An additional vent pipe was observed in the north-western portion of the site (north of the warehouse) indicating the potential for an additional UST in this area. The fill and/or dip points could not be opened during site investigations to confirm the contents of the USTs.

30 Burrows Road comprised a large warehouse on the western portion of the property, containing four tenants (two mechanic workshops, engineering business and marine mechanic workshop). Units #1 and #4 housed automotive and truck mechanic workshops that contained several car hoists. No chemicals were stored on site with the exception of automotive engine oil and several aerosol paint tins in Units #1 and #4 and gas cylinders used for welding in Unit #3.



The eastern portion of the property was used for storage and as a car park for vehicles being serviced on the property. Several shipping containers used for storage were present along the south-east boundary. Scrap metal and disassembled cars were also stored in this area with surficial oil staining observed on the hardstand.

The ground surface of 30 Burrows Road was mostly covered by hardstand. Surface staining was observed throughout the carpark where cars and trucks were stored. Evidence of two USTs and the remains of a disused fuel bowser were observed in the north-eastern portion of the site.

2.3 Project Scope of Works

The site will undergo the following redevelopment works including:

- Site preparation;
- Construction, fit out and operation of a three-storey industrial building for a flight training centre comprising 6,510 m² Gross Floor Area (GFA) including:
 - SIM Hall GFA 1,840 m²; and
 - Training Facility GFA 4,670 m².

Details design drawings are included in Appendix A.

2.4 Existing Environment

2.4.1 Topography

A review of eSpade 2.2 (OEH 2022¹) indicates that the site exists within an area mapped as 'Disturbed Terrain'. Topography is described as disturbed by human activity, local relief usually <2 m but up to 10 m. Most ground in these areas has been levelled to slopes <3 %.

The site inspection undertaken by JBS&G and reported in JBS&G (2022) indicates that the site is almost entirely paved and flattened, with the exception of southern portion of the site which grades down into the Alexandra Canal.

2.4.2 Buildings, Structures and Roads

The entrance to the site is located on Burrows Road. The site is comprised largely (approximately 70% of the site's footprint) by warehousing. A sealed heavy vehicle carpark with sparce vegetation is located in the southern portion of the site.

A truck access road along the northern western boundary of the site, with a parking area in the eastern boundary of the site.

Underground Petroleum Storage System (UPSS), comprising eight portable USTs and associated infrastructure as located at four locations in the northern corner and southwestern portion of the site.

Shipping containers are located along the eastern boundary of the site. A truck wash is located in the central portion of the site, with an oil separator pit and sewer pump located within proximity. A sump pit is located in the southwestern portion of the site.

2.4.3 Acid Sulfate Soils

A review of the DLWC risk map for Botany Bay (ref. 19984) indicates that the site exists within an area mapped as Disturbed Terrain. Soil investigation is required to assess these areas for acid sulfate soil (ASS) potential. JBS&G (2022) undertook a program of ASS assessment.

¹ OEH (2022) eSpade 2.0



JBS&G (2022) reported that the shallow gravelly sand fill-based soils encountered as part of this investigation do not comprise potential acid sulfate soil (PASS). However, the saturated underlying sands (at a depth of >2 m) comprise PASS and will require management during future construction activities if works were to result in the disturbance of these materials.

2.4.4 Vegetation

The site is predominantly surfaced with concrete hardstand or bitumen. Vegetation cover on the site is limited mostly to the northern nature strip and southern bank of the Alexandra Canal. All existing vegetation within the site will be removed as part of the proposed works to the extent shown in the Design Drawings (**Appendix A**).

2.4.5 Presence of Chemical Storage, Hazardous and Fill Material

According to previous site surveys there is the potential for the site to contain hazardous chemical associated with lead-based paint and some asbestos containing material in the current warehouses. Furthermore, it is anticipated that fill material may have been imported to create the existing site levels and therefore should any soil or material require disposal off-site as part of the scope of works, it will be classified as per the NSW EPA Waste Classification Guidelines (EPA 2014²) as discussed in **Section 4.1** and appropriately disposed of in accordance with the requirements of its classification.

2.4.6 Presence of Hazardous Building Materials

It is estimated that the building was constructed circa 1955. A hazardous materials survey was undertaken in June 2022 including a detailed inspection to identify hazardous building materials within the property. All hazardous building materials identified must be removed and disposed of accordingly.

² Waste Classification Guidelines. Part 1: Classifying Waste. NSW Environment Protection Authority (EPA 2014)



3. Legislative Requirements and Guidelines

3.1 Legislation

This WMP has been prepared in accordance with the requirements of the *NSW Waste Avoidance and Resource Recovery Act 2001* (WARR Act), and the NSW *Protection of the Environment Operations Act 1997* (POEO Act). These and other key legislation relevant to waste management at the site are provided in **Table 3.1**.

Legislation	Purpose
Protection of the Environment Operations Act 1997 Protection of the Environment Operations (Waste) Regulation 2014 (POEO Waste Regulation)	The POEO Act and associated regulations is key environment protection legislation administered by the NSW Environment Protection Authority (EPA). The object of the legislation is to achieve the protection, restoration and enhancement of the quality of the NSW environment. The Act enables the Government to establish policy instruments for setting environmental standards, goals, protocols and guidelines.
Waste Avoidance and Resource Recovery Act 2001 (WARR Act)	 The WARR Act promotes waste avoidance and resource recovery to achieve a continual reduction in waste generation, provides for development of a state-wide Waste Strategy, and introduces a scheme to promote extended producer responsibility for the life cycle of a product. Objectives of the Act include: To encourage the most efficient use of resources and to reduce environmental harm; To ensure that resource management options are considered against a hierarchy (see Section 3.3); Provide for the continual reduction in waste generation; To minimise the consumption of natural resources and the final disposal of waste; To ensure that industry shares with the community the responsibility for reducing and dealing with waste; and
Environmental Planning and	 To assist in the achievement of the objectives of the POED Act. The ED8.4 Act and Regulation provide the overarching structure for planning in
Assessment Act 1979 (EP&A Act)	NSW. They provide for a number of other statutory documents to support the planning structure including State Environmental Planning Policies (SEPPs) and
Environmental Planning and Assessment Regulation 2000	 Local Environmental Plans (LEPs). The objectives include: the proper management, development and conservation of natural and artificial resources; and to encourage ecologically sustainable development.
Environmentally Hazardous Chemicals Act 1985 (EHC Act)	 The EHC Act provides for control of the effect on the environment of chemicals and chemical wastes. The EPA is responsible for administering this legislation, in partnership with other state government agencies. It is the primary legislation for specifically regulating environmentally hazardous chemicals throughout their life cycle. The Act sets out requirements for: Chemical Control Orders (CCOs) which are used to manage specified hazardous chemicals and chemical wastes; Technology assessments, which ensure that premises treating or destroying chemicals are safe and appropriate for their purpose; and Licensing of individuals or industries who manage chemicals that are subject to a CCO.
Contaminated Land Management Act 1997 (CLM Act) Contaminated Land Management Regulation 2013	The CLM Act establishes a process for investigating and (where appropriate) remediating land that the EPA considers to be contaminated significantly enough to require regulation.



3.2 Guidelines

Guidance documents and policies considered in the preparation of this WMP are included in **Table 3.2.**

Guideline	Purpose
Waste Classification Guidelines (Part	The Waste Classification Guidelines have been established by the NSW EPA to assist
1: Classifying Waste) (EPA 2014b)	waste generators to classify wastes. Wastes are classified into groups that pose
	similar risks to environment and human health. Waste classifications are discussed
	further in Section 4.1 and Section 5.1.
Building Code of Australia (BCA)	The BCA contains technical provisions for the design and construction of buildings
	and other structures, covering such matters as structure, fire resistance, access and
	egress, services and equipment, and energy efficiency as well as certain aspects of
	health and amenity.
NSW Government Waste and	The strategy provides a framework for waste reduction and landfill diversion until
Sustainable Materials Strategy 2041	2027. Key targets include:
Stage 1: 2021-2027	Reduce total waste generated per person;
	 Introduction of overall litter and plastic litter reduction targets;
	Increase recovery rate from all waste streams;
	 Increase the use of recycled content by governments and industry;
	Phase out problematic and unnecessary plastics; and
	Reduce the amount of organic waste sent to landfill.
NSW EPA Better Practice Guidelines	The guide provides advice to assist architects, developers, council staff and
for Waste Management and	building managers to incorporate better waste management practice into the
Recycling in Commercial and	design, establishment, operation and ongoing management of waste services in
Industrial Facilities 2012	commercial and industrial developments.
How to manage and control asbestos	The Code of Practice is an approved code of practice under section 274 of the
In the workplace, Safework NSW	Work Health and Sajety Act 2011.
Code of Practice, 2019 (NSW	The Code provides guidance on now to manage risks associated with aspestos and
Government)	aspestos containing material at the workplace and thereby minimise the incluence
How to safely remove ashestes	The Code of Practice is an approved code of practice under the Work Health and
SafeWork NSW Code of Practice	Safety Act 2011
2016 (NSW Government)	The code provides practical guidance on how to safely remove ashestos from all
	workplaces including structures, plant and equipment and is to be read in
	conjunction with How to manage and control asbestos in the workplace Code of
	Practice.
Australian Government Construction	The aim of the guide is to help develop effective markets for materials diverted or
and Demolition Waste Guide. 2011	derived from the construction and demolition waste stream.
Australian Government Sustainable	The Guide provides step-by-step guidance on how to consider sustainability in the
Procurement Guide, 2021.	different stages of the procurement process, from identifying the business needs
,	to the end of the contract. It encourages The Guide was developed for Australian
	Government purchasers to include sustainability considerations in all stages of the
	procurement process, from identifying the business need to disposing of goods.
Sampling Design Guidelines –	The Sampling Design Guidelines were established by the NSW EPA to:
Contaminated Sites. NSW EPA, 1995	 Encourage the use of a statistically based approach to the design and
	sampling for contaminated sites and the interpretation of these samples
	for assessing and validating contaminated sites; and
	 Provide a convenient summary of statistical methods.

3.3 Waste Hierarchy

Waste management for the project will be undertaken in accordance with the waste hierarchy, which underpins the objectives of the *Waste Avoidance and Resource Recovery Act 2001*. The waste hierarchy shown in **Figure 3.1** demonstrates preferred approaches to waste management to ensure sustainable development and use of resources.





Figure 3.1: Waste Hierarchy

The hierarchy also aims to maximise efficiency and avoid unnecessary consumption of resources. This WMP seeks to implement the waste hierarchy to minimise waste disposal and promote waste reduction in order of preference:

- Reduce or avoid waste through selection of items and design;
- Reuse materials without further processing;
- Recycle and process waste for reuse as a new product;
- Recover energy through combustion of materials where acceptable and in accordance EPA Regulations;
- Treat waste to stabilise the waste product for disposal or reuse; and
- Dispose of waste when no other management options are appropriate.



4. Construction

4.1 Waste Streams and Classification

4.1.1 EPA Waste Classification

The NSW EPA Waste Classification Guidelines (EPA 2014) provides for the classification of wastes into groups that pose similar risks to the environment and human health, which are defined in the POEO Act. Classes of waste described in the guideline are described in **Table 4.1**.

Waste Classification	Description
Special waste	Special wastes are wastes that pose specific regulatory requirements due to the risks of harm to the environment and human health. These wastes include clinical and related waste, asbestos waste, waste tyres, and anything classified as special waste under an EPA gazettal notice.
Liquid waste	 Liquid waste is classified as any waste (other than special waste) that meets the following criteria: Has an angle of repose of less than 5 degrees above horizontal; Becomes free flowing at or below 60 degrees Celsius or when it is transported; Is generally not capable of being picked up by a spade or shovel; and/or Is classified as liquid waste under an EPA gazettal notice.
Hazardous waste Restricted solid waste General solid waste (putrescible) General solid waste (non-putrescible)	Where the waste is neither liquid nor special waste; the EPA has pre-classified other commonly generated waste types, as defined in Schedule 1 of the POEO Act. This includes hazardous waste, restricted solid waste, general solid (putrescible) and general solid (non- putrescible) waste. Putrescible waste is the component of the waste stream that is liable to become putrid, and usually refers to vegetative, food and animal products. A list of all currently gazetted waste classifications is provided on the EPA website at: <u>www.epa.nsw.gov.au/waste/wastetypes.htm</u> . In accordance with the waste classification guidelines, VENM is pre-classified as general solid waste (non-putrescible) as detailed below.
Virgin Excavated Natural Material (VENM) and Excavated Natural Material (ENM)	Surplus soils generated by the works may also be classified as virgin excavated natural material (VENM), or meet the requirements for excavated natural material (ENM) (i.e. naturally occurring rock and soil that has been excavated and used for alternate purpose (e.g. cut to fill, use as a noise mound). See: <u>https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/virgin-excavated- natural-material</u> and <u>https://www.epa.nsw.gov.au/~/media/EPA/Corporate%20Site/resources/waste/rro14- excavated-natural-material.ashx</u>

Table 4.1: Summary of NSW EPA Waste classifications

4.1.2 Waste Streams and Classification

A variety of waste types are expected be generated during the site preparation and construction parts of the project. Potential waste types and corresponding EPA classifications for the Sydney Flight Training Centre are summarised in **Table 4.2**.



Waste Type	EPA Classification	Generated	Project Phase
Excavated Soil	Subject to Waste Classification as per EPA	Potential	Excavation,
	2014 following excavation		Construction
Green waste (Garden Organics)	General solid waste (non-putrescible)	Potential	Excavation (site
			preparation)
Metals (including roofing)	General solid waste (non-putrescible)	\checkmark	Construction
Wood waste (including joinery offcuts)	General solid waste (non-putrescible)	\checkmark	Construction
Blockwork	General solid waste (non-putrescible)	\checkmark	Construction
Glazed Bricks	General solid waste (non-putrescible)	\checkmark	Construction
Concrete (Building frames, cores & roof; external works; slab)	General solid waste (non-putrescible)	\checkmark	Construction
Plasterboard	General solid waste (non-putrescible)	\checkmark	Construction
Glass	General solid waste (non-putrescible)	\checkmark	Construction
Carpet Tiles	General solid waste (non-putrescible)	\checkmark	Construction
Vinyl	General solid waste (non-putrescible)	Potential	Construction
Plastic (Artificial Turf and other durables (non-packing))	General solid waste (non-putrescible)	Potential	Construction
Plastic and foam packaging	General solid waste (non-putrescible)	\checkmark	Construction
General refuse	General solid waste (putrescible), and	\checkmark	Construction
	General solid waste (non-putrescible)		
Electrical (HV and LV)	General solid waste (non-putrescible)	\checkmark	Construction
Optic fibre wiring	General solid waste (non-putrescible)	Potential	Construction
Light bulbs	Hazardous waste	Potential	Construction
Batteries	Hazardous waste	Potential	Construction
Empty drums (e.g. oil, fuel,	Hazardous waste if the containers previously	\checkmark	Construction
chemicals, paint, spill clean-up)	used to store Dangerous Goods (Class 1, 3, 4,		
	5 or 8) and from which residues have not		
	been removed by washing or vacuuming.		
	General solid (non-putrescible) waste if		
D)(C pipes (starmuster electrical	Concarded by washing of vacuuming.	Detential	Construction
optic fibre, sewer)	General solid waste (non-putrescible)	Potential	Construction
Site runoff (wastewater)	Liquid waste	Potential	Construction
Sewage	Liquid waste	Potential	Construction
Asbestos containing materials	Special waste	\checkmark	Construction
Lead based paints	Hazardous waste	Potential	Construction

4.1.3 Waste Quantities

4.1.3.1 Construction

Indicative quantities of waste likely to be generated during construction (excluding excavation and other enabling works) have been calculated based on published waste generation rates for construction projects. Published data for total waste volumes per unit area and for waste composition have been used, and combined with the total areas of each component of the project to estimate waste generation.

It is expected that actual waste quantities and composition will vary depending on outcomes of detailed design, materials specification and construction planning and methods.

Estimates of total waste volumes per unit area have been derived from benchmark data developed by the UK Building Research Establishment in **Table 4.3** (BRE 2012³), which is based on waste generation at various construction projects including commercial and industrial buildings. A value of 13 m³ per 100 m² has been adopted for the redevelopment works proposed at the Sydney Flight

³ Building Research Establishment Group. *Smartwaste - BRE Waste Benchmark Data* (BRE 2012)



Training Centre, consistent with the commercial/industrial waste value, which most closely reflects this project component.

Average volume (m ³) of waste per 100 m ²
18.1
20.9
14.4
13.0
19.1
20.7
17.4
19.8
20.9

Table 4.3: Average Volumes of Waste Produced by Different Project Types

Source: BRE (2012)

Indicative waste composition information shown in **Table 4.4** (derived from the Sustainability Victoria Waste Wise Tool Kit (2013⁴)) has then been applied to the estimated total waste volumes to estimate quantities for each waste stream.

Material	Estimated Waste %	Conversion Factor (Density) (tonnes per m ³)	Estimated Waste (m ³)	Estimated Waste (t)
Hard material	32%	1.2	285	342
Timber	24%	0.3	213	64
Plastics	15%	0.13	133	17
Cement sheet	9%	0.5	80	40
Gypsum	6%	0.2	53	11
material				
Metals	6%	0.9	53	48
Paper / card	4%	0.1	36	4
Vegetation	3%	0.15	27	4
Soil	1%	1.6	9	14
Total	100%	-	889	543
Other	0.3%	0.3	3	1

Table 4.4: Guide to Waste Composition and Volumes – Construction

Source: Sustainability Victoria Waste Wise Tool Kit (2013)

Table 4.4 summaries the waste types and indicative volumes that have been estimated for construction of the Sydney Flight Training Centre. The total waste volumes for the development were estimated using the proposed developments floor plan area of 6,510 m², which was derived from the design plans in **Appendix A**.

The quantities outlined in **Table 4.4** are high level estimates and are intended to provide an indication of potential waste generation quantities. It is expected that actual waste quantities and composition will vary depending on outcomes of detailed design, materials specification and construction planning and methods. Based on the guidelines for Waste Management in New Developments, City of Sydney (2018⁵), **Table 4.5** outlines the management of proposed construction waste and further discussed in **Table 4.6**. Strategies that will be implemented to minimise waste generation and maximise reuse and recycling are outlined in **Section 4.2.2**.

⁴ Sustainability Victoria Waste Wise Tool Kit (2013)

⁵ Guidelines for Waste Management in New Developments, City of Sydney, August 2018



Material	Estimated Volume (m ³)	Reuse / Recycle Onsite	Offsite Disposal
Hard material	285	-	Transfer to a recycling facility
Timber	213	Reused where possible	Transfer to a recycling facility
Plastics	133	-	Transfer to a recycling facility
Cement sheet	80	-	Transfer to a concrete recycling
			facility
Gypsum material	53	-	Transfer to a recycling facility
Metals	53	-	Transfer to a recycling facility
Paper / card	36	-	Transfer to a recycling facility
Vegetation	27	-	Transfer to recycling facility or
			disposed to landfill
Soil	9	Classification to determine	Disposal dependant on waste
		reuse	classification
Other (brick,	3	Reused where possible Unusable products will be tra	
plasterboard etc.)			to a recycling facility

Table 4.5: Estimate for Management of Construction Waste

It is understood that a final WMP, or alternatively a Construction Environmental Management Plan (CEMP) including a waste management sub-plan will be prepared by the appointed contractor prior to redevelopment of the site.

4.2 Waste Management

Site specific waste management measures have been developed in line with the waste hierarchy outlined in **Section 3.3** and in accordance with the relevant legislative requirements and guidelines. These measures are applicable to the demolition and construction phases of the project.

4.2.1 Avoidance and Reduction of Waste

The demolition, excavation (if required) and construction contractor will be required to avoid waste generation, and endeavour to reuse materials where possible, thereby minimising waste generation.

During the construction phase, waste generation will be avoided through strategic selection of materials during design and purchasing, considering options to reduce waste generation for the project. This includes consideration of procurement of materials which are prefabricated, use minimal packaging, and are suitable for reuse across the site. Selection of construction materials will also consider the use of recycled items where practicable.

Opportunities to avoid wastes generated by construction include:

- Develop a procurement policy which considers waste avoidance measures such as:
 - Order site specific or prefabricated items where practicable to minimise surplus material;
 - Consider packaging material provided by suppliers during purchasing and reduce this requirement where possible, or consider returnable packaging;
 - Material selection to consider recycled items;
- Refine waste stream estimates to ensure adequate on-site storage and segregation; and
- Refine estimated volumes of materials for construction.

4.2.2 Reuse and Recycling

For waste materials onsite, measures to separate waste streams will be implemented. This includes segregating wastes into appropriate dedicated bins or areas for reclamation on site or transportation to a designated recycling facility.

Concrete waste and waste rinse water are not to be disposed of at the site and rinse waters are required to be prevented from entering surface waters, including natural and artificial watercourses.



If material containing asbestos is identified and cannot be safely removed/encapsulated, off-site disposal is the most appropriate option. The construction contractor will then liaise with a licensed asbestos removalist to determine a suitable disposal facility. Measures for dealing with hazardous waste (asbestos) are discussed in **Table 4.6**.

Procedures to manage the reuse and recycling of waste materials during construction include:

- Incorporation of waste management into development staging to promote reuse of materials across the site;
- Ensure areas for waste segregation are easily accessible and clearly defined;
- Ensure contractors are familiar with onsite waste storage areas for appropriate waste segregation;
- Determine suitability of materials generated during demolition for use in construction; and
- Consider opportunities for materials reuse in areas in proximity to the site or local construction activities where practicable.

4.2.3 Treatment and Disposal

Project wastes may require treatment to stabilise them for appropriate disposal to reduce the risk of harm to human health or the environment. These materials are not suitable for reuse or recycling and must be segregated and disposed of via a suitably qualified contractor.

Wastes will only be sent to landfill or disposal facilities where the prioritised management methods in the hierarchy cannot be effectively implemented. The construction contractor will liaise with the local council to determine appropriate disposal locations for potential waste streams.

Measures to manage the treatment and disposal of waste materials during construction include:

- Ensure wastes which cannot be reused or recycled and require disposal are clearly segregated from those which have the potential to be reused.
- Provide segregated bins for subcontractors to dispose of construction waste (i.e., metal, plastics and cardboard).
- Contractors and staff to be inducted into site waste management practices.
- Hazardous materials including asbestos (if identified) to be disposed of in accordance with the handling and disposal requirements of SafeWork NSW and NSW EPA.
- General wastes to be disposed of in accordance with NSW EPA/local council requirements.
- Toilet facilities must be regularly serviced and emptied by a licensed contractor.

Concrete waste and waste rinse water are not to be disposed of at the site and rinse waters are required to be prevented from entering surface waters, including natural and artificial watercourses.

4.2.4 Waste Stream Management Options

The waste management measures outlined in **Table 4.6** will be implemented for each waste stream generated as part of the project. Key waste streams identified for this project have been discussed in more detail in this section to ensure appropriate waste handling for each type of waste.

Each waste stream will be separated and stored appropriately to ensure each type of waste is handled in the most appropriate and efficient way. The numbers and size of waste storage bins, containers, stockpile areas and loading zones on site will be determined by the demolition/excavation and construction contractor.



The Principal Contractor appointed by the client will implement its own waste management systems in accordance with this plan to ensure any existing waste management systems are not impacted by the redevelopment works.

4.2.5 Other Considerations

To ensure waste is not unintentionally tracked off-site, the vehicles or trailers used to transport waste or excavated spoil from the site will be covered before leaving the subject site, to prevent spillage or escape of dust, waste or spoil from the vehicle or trailer. Any mud, splatter, dust and other material that is likely to be released from the wheels, underside or body of vehicles, or plant leaving the site will also be removed through a shaker bay or wash down area prior to leaving the subject site.



Table 4.6: Waste Stream Manage	ement
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Waste Stream	Project Phase	Management
Concrete	Construction	Concrete waste is likely to be generated during the construction of the new building.
		There is also a possibility that concrete waste may be generated from excess concrete poured during construction, although this will be minimised wherever possible using the methods outlined in Section 4.2.1 .
		Concrete can be reprocessed and may, in some instances, be reused across the subject site, however, the general practice is to break up/crush the concrete and arrange for disposal to a recycling facility or disposal offsite.
		Options may include disposal of excess concrete to a HDPE lined pit on site, to allow for regular reprocessing or disposal to a recycling facility. Wet supply may be placed back into supply trucks to return to the producer at the cost of an additional fee.
Soil	Construction	Soil is likely to be generated during establishment activities, potential excavation to establish required site levels, installation of infrastructure and other construction activities. Soil surplus to the site requirements will be sampled, analysed and classified in accordance with NSW EPA Waste Classification Guidelines (EPA 2014) prior to for offsite disposal at a facility that is licensed to accept that class of waste.
		Soil impacts were identified in JBS&G (2022b) to be associated with Underground Petroleum Storage System (UPSS) infrastructure to be removed from site, residual disused operational infrastructure (including sump pot, oil separator pit and sewer pump), as well as a surface oil staining on the southeast site corner. In addition, fill material (containing building and demolition wastes) are present throughout the site ranging from 0.2 metres below ground surface (m bgs) to 1.1 m bgs.
		Based on previous investigation at the site, a 90% recycled and re-used target has been set for the project, it is anticipated that the excavated materials that meet the relevant site reuse criteria will, where possible be reused to establish the required site levels during construction works. A soil management plan (as part of a Construction Environmental Management Plan) will be developed to provide guidance for all soil testing, excavation, reuse and disposal works.
		It is anticipated, that based on minimal excavation work proposed, bedrock material is not expected to be exposed during the remediation phase of the redevelopment. However, if required it is expected that an assessment of relevant material will identify that undisturbed natural soil and bedrock at the site will meet the definition of VENM for off-site disposal or re-use purposes. VENM is considered suitable for re-use on-site, or alternatively, may be suitable for beneficial reuse at another site as fill material. In accordance with Part 1 of the Waste Classification Guidelines (EPA 2014), the VENM is pre-classified as general solid waste and may also be disposed of accordingly to a facility that is licensed to accept it.
		Where stockpiling is required prior to redistribution, control measures to avoid sediment and erosion will be implemented where appropriate. This may include establishing a bund or lining of the base with an impermeable HDPE plastic liner.
		Where excess soil cannot be redistributed or has been situated in proximity to asbestos containing materials, the soil is required to be treated and/or disposed of, potentially as low-level contaminated waste via a licensed removalist to a disposal facility.
Metals	Construction	There is a possibility that metal waste may be generated from excess materials purchased for the site as part of construction work, although this will be minimised wherever possible using the methods outlined in Section 4.2.1 .
		Principal Contractor appointed by the client will investigate and determine appropriate storage and recycling of metals to reduce waste, including location and signage of skip bins onsite.



Waste Stream	Project Phase	Management
		Where recycling of metal is not feasible, for example distribution to salvage yards for reuse, the contractor will organise disposal of the timber to a licensed waste facility.
Wood Waste	Construction	It is likely that wood waste (timber) may be generated as a result from excess materials purchased as part of building construction works, although this will be minimised wherever possible using the methods outlined in Section 4.2.1 .
		Principal Contractor appointed by the client will investigate and determine appropriate storage and recycling of timber to reduce waste, including location and signage of skip bins onsite.
Plasterboard	Construction	Plasterboard is likely to be generated during construction of new buildings, although this will be minimised wherever possible using the methods outlined in Section 4.2.1 .
		Principal Contractor appointed by the client will investigate and determine appropriate storage and recycling of plasterboard to reduce waste, including location and signage of skip bins onsite.
		Uncontaminated plasterboard (e.g. offcuts) or material with low levels of contamination such as nails and screws is completely recyclable and can be recycled for use in new plasterboard or the gypsum used in agricultural soil conditioners.
Plastics	Construction	Plastic wastes associated with packaging for construction materials can be recycled or in some cases returned to the supplier of the materials for reuse. Where possible, plastic (non-durable) wastes will be reduced using the methods outlined in Section 4.2.1 .
General Waste	Construction	Wastes such as food waste, organics and biodegradable material will be created as a result of worker activity on site. Non-putrescible wastes are generally inert, or solid, and are not able to be composted, recycled, reprocessed or reused.
		Principal Contractor appointed by the client will ensure adequate bins are provided on site for putrescible waste. This is particularly important around worker congregation areas, site office areas and toilet facilities.
		It is likely that general waste will increase at times of internal and service fit out during construction, primarily associated with excess packaging materials and workers on site. Principal Contractor will determine the location of skip bins and specify waste stream separation measures across the site.
		Where possible, co-mingled recycling bins will be provided in common areas at work sites for plastic and glass bottles, soft drink cans, aluminium and tin cans to avoid these items being disposed to landfill. Specialised bins for cigarette butts will also be provided in designated smoking areas.
Hazardous Waste – General	Construction	Hazardous waste could may be generated during construction of new buildings (e.g. light bulbs, batteries, used drums from oil, fuel, chemicals or paint).
		Separate containers for the safe storage of these wastes will be provided where applicable, prior to removal offsite by an appropriately licensed contractor for recycling or disposal at a licensed facility.



4.3 Roles and Responsibilities

This WMP forms the basis of waste management on site for the excavation and construction phase of the Sydney Flight Training Centre redevelopment works.

It is expected that all construction personnel will commit to the WMP and be responsible for their own actions in adhering the waste management objectives. Waste management criteria (such as those contained in this report) is to be contractually binding for all contractors working on the site.

A Construction Site Manager will be the key person responsible for implementation of the WMP and adherence to applicable legislation, guidelines, licensing and project conditions outlined herein.

 Table 4.8 presents suggested responsibilities for waste management.

Role	Responsibility
Environmental Management Representative	 Compliance with applicable environmental licences, legislation and project conditions. Ensure environmental management plan(s) across the site are adhered to and accurate to site conditions. Undertake inspections to ensure compliance.
Construction Site Manager	 Ensuring workers and subcontractors are inducted into the WMP along with other applicable management plans. Responsible for undertaking procurement of construction materials in accordance with the waste management hierarchy. Segregation of waste streams where required to ensure appropriate use, treatment and/or disposal.
Health and Safety Manager	 Safety inductions for all staff, workers and visitors. Work with Construction Site Manager to determine safe handling of asbestos waste in compliance with regulatory requirements.
Site Workers	 Responsible for acting in accordance with the WMP and site inductions. Informing the Construction Site Manager of any waste management incidences and Health and Safety Manager of any safety issues associated with on-site activities.

Table	4.8:	Roles	and	Responsibilities

4.3.1 Training and Awareness

Staff present on site during the construction stage of the project will be required to undertake induction and awareness training inclusive of the WMP and site-specific waste management. This includes:

- Induction to the waste management hierarchy and use across the site; and
- Details of responsibilities for waste management and key personnel;
- Site specific waste management practices relevant to the project stage such as:
 - Waste storage and stockpiling locations;
 - Waste disposal requirements;
 - Hazardous or special wastes;
 - Record of waste disposal details and receipts; and
- Knowledge of emergency response procedures and contacts; and
- Asbestos Awareness Training.

Signage will be provided on site to ensure waste management measures are communicated across the subject site, particularly for contractors and visitors who are not regularly on site. Signage will highlight correct procedures for separating wastes where required, locations of bins and waste storage areas, labelling of designated bins, potential hazards associated with the waste streams and handling, and contact details should any issues be encountered.



Signage will be prepared and located on site in accordance with the Australian Standard (AS 1319) for safety signs, and the NSW EPA and Australian Standard for recycling signage.

4.4 Monitoring and Reporting

The following activities will be undertaken to inform future onsite waste management and to determine the success of the WMP:

- Ensure waste quantities generated are recorded, including tracking of receipts from waste recycling or disposal via the appointed waste contractor;
- Record waste classification and testing results;
- Review the WMP in light of any changes to construction activities or further information which may alter waste management practices;
- Undertake auditing of waste management across the site as a component of broader environmental site audits;
- Undertake visual inspections daily to ensure waste management controls are implemented and maintained across site; and
- Undertake final review of the WMP upon project completion to ensure information accurately reflects site activities, and to assist future waste management.

Outcomes of audits and waste tracking will be reported to the client or the Principal Contractor, potentially through weekly or monthly reporting to ensure waste management objectives are adhered to.

4.4.1 Corrective Action

Where formal auditing, daily visual inspections or incident reporting identify incorrect storage or disposal procedures, or maintenance or waste management issues, observations will be promptly reported to the Construction Site Manager and recorded. The Construction Site Manager will determine appropriate measures to rectify the issues in a timely manner in consultation with the Environmental Management Representative and Health and Safety Manager where required.



5. Operation

5.1 Waste Stream and Classification

5.1.1 Site Specific Waste Streams

Potential waste types and corresponding EPA classifications for the operation of facilities constructed on the site are summarised in **Table 5.1**.

Waste Type	EPA Classification	Waste Stream
Paper including all types of recyclable paper but excluding paper towels, toilet paper and tissues.	General solid waste (non-putrescible)	Paper recycling
Cardboard, excluding waxed cardboard.	General solid waste (non-putrescible)	Cardboard recycling
Metals (steel, aluminium, stainless steel, and copper piping or wire)	General solid waste (non-putrescible)	Co-mingled recycling, specific recycling or general waste
Wood (timber, wooden pallets)	General solid waste (non-putrescible)	Specific recycling or general waste
Plastics (recyclables)	General solid waste (non-putrescible)	Co-mingled recycling
Plastics (non-recyclables)	General solid waste (non-putrescible)	General waste
Soft plastics	General solid waste (non-putrescible)	Soft plastic recycling
Green waste (grass clippings and tree prunings)	General solid waste (non-putrescible)	General waste or compost
Glass including bottles and containers.	General solid waste (non-putrescible)	Co-mingled recycling
Light bulbs, batteries, e-waste	Potentially hazardous waste	Specific recycling
General refuse such as food scraps and non-recyclable plastics.	General solid waste (putrescible) or General solid waste (non-putrescible)	General waste

Table 5.1: Potential Waste Types and Classifications

5.2 Waste Generation Quantities

5.2.1 Estimated Waste Quantities After Redevelopment Works

At the time of writing this WMP the facility was proposed as a Flight Training Centre and associated operations. Therefore, this WMP will address the potential waste generated by assessing warehouse and office uses. On this basis, it is appropriate to estimate indicative waste generation quantities for the site from calculated waste generation rates as per Reference A in the Guidelines for Waste Management in New Developments, City of Sydney (2018).

To derive indicative quantities of waste upon construction completion it is assumed that the site will be categorised as 'commercial offices' under the City of Sydney guidelines (2018) and will operate 24 hrs a day, 7 days a week. To develop a realistic waste generation estimate, council have agreed to reduce the assessed area to level one and two only.

Table 5.2 summarises the waste generation rates based on the City of Sydney guidelines (2018). Waste generation rates of the office areas have been calculated to account for administerial waste etc. An estimated waste, recycling and food waste generation can be predicted for the assumed site use as a flight training centre.



Table 5.2: Waste Management in New Developments (2018) Estimated Average Waste and RecyclingGeneration Rates

Premises Type	Area of Space (m ²) ¹	Average Waste Generation	Average Recycling Generation	Average Food Waste Generation
Commercial Offices	3,256	15 L / per day / per 100m²	25 L / per day / per 100m ²	5 L / per day / per 100m²
Expected Generation	-	3,419 L / per week	5,698 L / per week	1,140 L / per week
Total Expected Waste Generation ¹	-	10,257 L / per week		

¹ It is noted that the total area of space provided in this estimate, relates to the office areas of level 1 and level 2 of the facility only.

Table 5.3 summarises the allocated bin size, collection frequency and space required for the waste generated at the site. Specific bin locations are provided in the Design Plans in **Appendix A**.

Waste Stream	Waste Generated (L per week)	Bin Size (L MGB)	Clearance Frequency per week	Number of Bins	Space Required (m ²)
General Waste	3,419	1,100	2	2	3.7
Recycling Waste	5,698	1,100	2	2	3.7
Food Waste	1,140	1,100	1	1	1.8
Total Waste Generation	9.2				
Space required to store bu	8				
Total minimum space (was	17.2				

Table 5.3: Waste Generation Bin Requirements

Strategies that will be implemented to minimise waste generation and maximise reuse and recycling are outlined in **Section 5.3.1.1**.

5.3 Waste Management

5.3.1 EPA Waste Classification

5.3.1.1 Avoidance and Reduction of Waste

The ongoing site users will be required to minimise waste generation, and endeavour to reuse waste where available. Waste will be avoided through strategic selection of materials during purchasing which takes into account options which may reduce waste generation during ongoing operation of the site. This includes considering procurement of materials which use minimal packaging and are suitable for reuse. Selection of operational materials will also consider the use of recycled items where practicable.

Opportunities to avoid wastes generated by operation include:

- Develop a procurement policy which considers waste avoidance measures such as:
 - Order site specific or prefabricated items where practicable to minimise surplus material.
 - Consider packaging material provided by suppliers during purchasing and reduce this requirement where possible or consider returnable packaging.
 - Material selection to consider recycled items.
- Refine waste stream estimates to ensure adequate on-site storage and waste segregation, and to inform future procurement policies.



5.3.1.2 Reuse and Recycling

Measures to separate waste streams will be implemented to maximize re-use and recycling. This includes segregating wastes into appropriate dedicated bins or areas for reclamation on site or transportation to a designated recycling facility.

Procedures to manage the reuse and recycling of waste materials during operation include:

- Incorporate waste management into site management procedures to promote reuse and/or recycling of materials.
- Ensure areas for waste segregation are easily accessible and clearly defined.
- Ensure staff are familiar with onsite waste storage areas for appropriate waste segregation.
- Consider opportunities for materials reuse and/or recycling where practicable.

5.3.1.3 Treatment and Disposal

Operational wastes may require treatment to stabilise them for appropriate disposal to reduce the risk of harm to human health or the environment. These materials may not be suitable for reuse or recycling and will be segregated and disposed of via a suitably qualified contractor for the waste stream.

Wastes will only be sent to landfill or disposal facilities where the prioritised management methods in the hierarchy cannot be implemented in a cost effective or practical manner. The site manager will liaise with the local council to determine appropriate disposal locations for potential waste streams.

Measures to manage the treatment and disposal of waste materials during operation include:

- Ensure wastes which cannot be reused or recycled and require disposal are clearly segregated from those which have the potential to be reused.
- Provision of segregated waste bins for each waste type.
- Maintenance staff to be inducted into site waste management practices.
- Hazardous materials to be disposed of in accordance with the handling and disposal requirements of SafeWork NSW and NSW EPA.
- General wastes to be disposed of in accordance with local council requirements.

5.3.2 Waste Storage Systems

The future occupants of this site are expected to be associated with Flight Training operations, including office staff and pilots/crew members attending simulator training. Based on current waste generation rates and operations for the site, it is estimated that a maximum of 1,100 L mobile garbage bins (MGB) (or another combination of sizes) will be required for waste storage. If any of the warehouses are used by a third party, they will be required to provide their own operational waste management plan (OWMP) to ensure any waste is dealt with appropriately.

5.3.3 Waste Storage Areas

According to the design plans (provided in **Appendix A**) provided by the client, a waste storage area has been provided in the south-eastern corner of the site. Five 1,100L MGB in the south-eastern corner adjacent to the pump room, and an additional 8 m² area, located in the southern corner of the site, designated to store bulky and problem waste. To account for the flight training facility operations, a combination of MGBs will be required for waste storage (3,419 L for general waste, 5,698 L for recycling, and 1,140 L for food waste per week). A maximum of 10,257 L per week of waste will require five 1,100 MGBs.



5.3.4 Waste Facilities Construction / Maintenance

All waste facilities must comply with the Building Code of Australia (BCA) and all relevant Australian Standards (AS) in accordance with the requirements of Sydney DCP (2012).

5.3.5 Waste Collection Point

Waste is to be collected from adjacent to the bin storage locations along the southern boundary of the site. A one-way flow driveway has been developed in the design plan (provided in **Appendix A**), which will account for access for waste contractors collection from the designated waste storage areas at nominated times in accordance with the relevant waste contract.

5.3.6 Waste Collection Vehicle Movements

Waste collection vehicles shall not obstruct access to adjacent premises, roadways or the footpath. In addition, waste collection must be carried out with due care for public safety including other road users, cyclists and pedestrians.

5.3.7 Waste Collection Contractor

A licensed waste contractor will need to be engaged in order to ensure waste is correctly removed from the facility. All potential waste streams must be accounted for when hiring a waste collection contractor. Written evidence of the contract with the licensed collector for waste and recycling collection is to be provided to the client and the City of Sydney Council and held on site.

5.4 Ongoing Management

This WMP is intended to be a starting point for the proposed flight training centre once construction of the site is complete. If the final warehouses are occupied by different third-party companies, then separate OWMPs must be provided by each separate company.

Having suitable waste management systems in place is only one element of an effective waste management system at a "commercial" facility. Compliance by the administrative manager, staff, cleaning contractors and waste collection contractor is essential to ensure the efficacy of the system.

5.4.1 Roles and Responsibilities

It is expected that all personnel will commit to the WMP and be responsible for their own actions in adhering to the waste management objectives.

An Administrative Manager will be the key person responsible for implementation of the WMP and adherence to applicable legislation, guidelines, licensing and project conditions. The Administrative Manager will also be responsible for maintenance of the cleaning infrastructure such as the service doors, locks, lighting, signage, colour coding and repair/replacement of MGBs.

 Table 5.4 below presents suggested responsibilities for waste management.

Table 5.4: Roles and Responsibilities

Role	Responsibility
Administrative	Ensuring staff are inducted into the WMP and other applicable management plans.
Manager	Responsible for undertaking procurement of operational materials in accordance with the waste management hierarchy.
	Segregation of waste streams where required to ensure appropriate use, treatment and/or disposal.
	Compliance with applicable environmental legislation and project conditions.
	Ensure environmental management plan(s) across the site are adhered to and accurate to site conditions.
	Undertake inspections to ensure compliance.
	Maintenance of waste-related signage, colour coding and MGBs.
	Security of waste storage areas during day-to-day business.
	Ensure no waste is placed on the public way.



Role	Responsibility				
Staff	Adherence to the WMP.				
Stuff	Placement of waste/recycling within correct bins.				
Notify manager when bins are overfull and require transport to the MGBs.					
	Informing the Administrative Manager of any waste management incidences.				
Licensed Waste	Responsible for collection, disposal and/or recycling of waste in accordance with contract and relevant legislation and guidance.				
Contractor	Provide feedback on actual volumes of waste and recycling collected to enable waste volume evaluation by Administrative Manager.				

5.4.2 Training and Awareness

All staff and contractors will undertake awareness training of the WMP and site-specific waste management. This includes:

- Induction to the waste management hierarchy and use across the site.
- Details of responsibilities for waste management and key personnel.
- Site specific waste management practices such as:
 - Waste storage and stockpiling locations;
 - Waste disposal requirements;
 - Hazardous or special wastes; and
 - Record of waste disposal details and receipts.
- Knowledge of emergency response procedures and contacts.

Signage will be provided on site to ensure waste management measures are communicated across the site. Signage will highlight correct procedures for separating wastes where required, locations of bins and waste storage areas, labelling of designated bins, potential hazards associated with the waste streams and handling, and contact details should any issues be encountered.

Signage will be prepared and located on site in accordance with the Australian Standard (AS 1319) for safety signs, and the NSW EPA and Australian Standard for recycling signage.

5.5 Monitoring and Reporting

The following activities will be undertaken to inform future onsite waste management and to improve the efficiency in achieving the outcomes of the WMP:

- Review of waste streams and waste quantities.
- Review the WMP in light of any changes to operational activities or further information which may alter waste management practices.
- Undertake auditing of waste management across the site as a component of broader environmental site audits.
- Undertake visual inspections to ensure waste management controls are implemented and maintained across site.
- Undertake annual review of the WMP to ensure information accurately reflects site activities, and to assist future waste management.

Where formal auditing, general inspections or incident reporting identify incorrect storage or disposal procedures, or maintenance or waste management issues, observations will be promptly reported to the Administrative Manager and recorded. The Administrative Manager will determine appropriate measures to rectify the issues in a timely manner.



6. Recommendations

This Waste Management Plan will need to be updated once construction volumes have been finalised.

This WMP must be in accordance with the sites SEARs application which requires the following waste management measures to be addressed:

'Details of the quantities and classification of all waste streams to be generated onsite during the construction and operations. Details of waste storage, handling, and disposal requirements in accordance with the City of Sydney Guidelines for Waste Management in New Developments.'

This WMP was written at a time when future occupants were Sydney Flight Training Centre. As such, this WMP addresses the potential waste generated by assessing the specific proposed use as a flight training centre.

Prior to commencement of construction, a Construction Environmental Management Plan (CEMP) will need to be developed. This WMP will form a sub-plan of the CEMP for the redevelopment works. The CEMP must also include a soil management plan and an asbestos removal control plan.



7. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only and has been based in part on information obtained from the client and other parties.

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Figures







Appendix A Design Drawings

DRAWING LIST:

COVERPAGE	04.10.22	19
SITE PLAN	20.09.22	16
GROUND FLOOR PLAN	30.09.22	18
LEVEL 1 & LEVEL 2 PLAN	04.10.22	19
SECTIONS - LONG	26.09.22	17
SECTION - SHORT	26.09.22	17
ELEVATION NORTH AND SOUTH	04.10.22	19
ELEVATION EAST & WEST	26.09.22	17
3D PERSPECTIVE - EAST CORNER	20.09.22	16
3D PERSPECTIVE - WEST CORNER	20.09.22	16
3D PERSPECTIVE - ALEXANDRA CANAL	20.09.22	16
3D AXONOMETRIC AERIAL VIEW	20.09.22	16
3D AXONOMETRIC AERIAL VIEW2	20.09.22	16
3D AXONOMETRIC AERIAL VIEW3	20.09.22	16
MATERIALS	20.09.22	16
3D PERSPECTIVES - BURROWS ROAD	20.09.22	16
SIGNAGE & WAYFINDING SITE PLAN	04.10.22	19
GFA PLANS	20.09.22	16
	COVERPAGESITE PLANGROUND FLOOR PLANLEVEL 1 & LEVEL 2 PLANSECTIONS - LONGSECTION - SHORTELEVATION NORTH AND SOUTHELEVATION EAST & WEST3D PERSPECTIVE - EAST CORNER3D PERSPECTIVE - WEST CORNER3D PERSPECTIVE - ALEXANDRA CANAL3D AXONOMETRIC AERIAL VIEW3D AXONOMETRIC AERIAL VIEW3MATERIALS3D PERSPECTIVES - BURROWS ROADSIGNAGE & WAYFINDING SITE PLANGFA PLANS	COVERPAGE 04.10.22 SITE PLAN 20.09.22 GROUND FLOOR PLAN 30.09.22 LEVEL 1 & LEVEL 2 PLAN 04.10.22 SECTIONS - LONG 26.09.22 SECTION - SHORT 26.09.22 ELEVATION NORTH AND SOUTH 04.10.22 ELEVATION NORTH AND SOUTH 04.10.22 3D PERSPECTIVE - EAST CORNER 20.09.22 3D PERSPECTIVE - WEST CORNER 20.09.22 3D PERSPECTIVE - ALEXANDRA CANAL 20.09.22 3D AXONOMETRIC AERIAL VIEW 20.09.22 3D AXONOMETRIC AERIAL VIEW3 20.09.22 3D PERSPECTIVES - BURROWS ROAD 20.09.22 SIGNAGE & WAYFINDING SITE PLAN 04.10.22



SYDNEY FLIGHT TRAINING CENTRE

28-30 Burrows Road, Sydney, Australia

SSDA DOCUMENTATION



PERSPECTIVE:



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0.2	scale	1:150	A1		
	project ı	10 220507			
RELIMINARY	date	26.09.22			
S - LONG	dwn	dwg no		issue	
	PGT	220507 - CT200		17	



18m HEIGHT LIMIT							
	ARCHITECTURAL EXPANDED MESH PRIVACY SCREENS		PLANT		PLA		PLAI
	SIMULATOR HALL	3,600	CBT CLASSROOM #1			CONFERENCE ROOM #1	
				CORRIDOR	CORRIDOR	DEBRIEF#4	CORRIDOR
			EP EQUIPMENT	CORRIDOR			W/DE BODY TRAINER





	NOTE 1: ALLOW +/- SUUMM TO THE PROPOSE	<u>D FINISHED FLOOR LEVEL (BUILDING HEIGHT TO TOP OF PLANT NOT TO EXCEE</u>	D 19M ABOAF	<u>NATURAL GROUND - APPROX R.L. 20722</u> <u>NOTE 2: BUILDING OVERALL DIMENSION (U/A) MEA</u>
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			REVISION	DESCRIPTION
		SYDNEY FLIGHT TRAINING	8	REVISED ROOFTOP PARAPET
PACEARCHITECTS	A.B.N. 721 5926 6350	CENITDE	9	REVISED NORTHERN FACADE - CURTAIN GLASS WALL SETOUT AMENDED
	 ppace@pacearchitects.com.au 02 9425 1400 	CEINIKE	14	ISSUE FOR CLIENT APPROVAL AS COUNCIL DEVELOPMENT APPLICATION
RIA	m 0404 450 317	28-30 Burrows Road, Sydney, Australia		DRAWING SET
Member Australian	w www.pacearchitects.com.au		15	COUNCIL MEETING REVISED WORK IN PROGRESS DRAWING SET
Institute of Architects	a Level I, Suite 5-6, 100 Alexander Street. Crows Nest, NSW 2065		16	ISSUED FOR CONSULTANT CO-ORDINATION
			17	BUILDING O/A HEIGHT CLARIFIED TO ELEVATIONS & SECTIONS, SIMULATOR

	•			-	220,722
				(n	
				NDE (F	
<u> </u>			29	N GR/	<u> </u>
\$			17,5	FROM	
s 				APET	LEVEL 1. 🔽
				PAR	8,577
					GROUND FLOOR
					GRADE (FP)
					2,986
					0
ED					
BOU					
					MAX BLDG HEIGHT
					20,7225
				+	LOW ROOF
				(FP)	
				ADE	16,456 LEVEL 2.
			529	M GR	13,267
			17,	T FRC	
				SAPE.	LEVEL 1.
				PAI	8,577
			`	↓	3,700
		ALEXANDRA CANAL			GRADE (FP)
DVERED REFUSE STORAGE			_		
FINISHES I EGEND					0
	COLOUR	2			REFERENCE IMAGES
DADO PANELS HEIGHT VARIES	EXPOSED V	WITH ANTI-GRAFITTI CLEAR	COAT FI	NISH .	
) MASONRY - RAMP BALUSTRADE WALLS ED SLAB DOWNTURNS (GROUND LVL)	TO MATCH	COLORBOND: 'SHALE GRE'	Y'		
) MASONRY / PRECAST WALLS - ENTRY ALL & PUMP RM / REFUSE STORAGE RM	TO MATCH	COLORBOND: 'MONUMENT	'		
D METAL CLADDING - OFF WHITE	COLORBON	ND: 'SHALE GREY'			
D METAL CLADDING - LIGHT GREY	COLORBON	ND: 'WINDSPRAY' — — -			
D METAL CLADDING - DARK GREY					
IG - DARK GREY	PANELISED) SYSTEM IN COLOUR SIMIL	.ar 10 (4) .ar to (6)		
O LVL 1 & 2) ESS +FIRE EGRESS	ТО МАТСН	COLORBOND: MONUMENT	'		
IERGY EFFICIENT GLAZING	TO MEET SI	ECTION J REQUIREMENTS			
DLOURBACK GLASS - DARK GREY	TO MEET SI		NS: MONU AND TO N	JMENT 1ATCH	COLOUR
DLOURBACK GLASS - OFF WHITE	OF SPANRE TO MEET SI	ELS - SIMILAR TO (6) ECTION J REQUIREMENTS			
EEN / FINS / BLADES	TIMBERLOC	OK: LIGHT / PALE TONE			
TO RAMPS & STAIRS	TO MATCH	COLORBOND: 'MONUMENT	'	_	
ET SCREENING (ROOF PLANT)	COLORBON	ND: 'SHALE GREY'			
VERTICAL RETURN TO PROJECTING	CAE BLUE:	PANTONE '2387 C' — —		_	
≥E & VERTICAL) DRS, AWNINGS, LOUVRES - OFF WHITE	COLORBON	ND: 'SURFMIST'			
S, FASCIAS & DOWNPIPES	COLORBON	ND: 'WINDSPRAY' AND PAIN'	T FINISH I	MATCH	PANTONE: part.
OORS	TO MATCH	COLORBOND 'SURFMIST'			
F SHEETING	ZINCALUME	E— — — — — — —			
E TO SUBSTATION ON STREET FRONT	TIMBERLOC	DK: LIGHT / PALE TONE			
NWATER TANKS	GALVANISE	ED METAL			
	0.2	scale As in	ndica	itea	d A1
		project no 2205	507		
RELIMINARY		date 26.0	9.22		
N EAST & WEST		dwn dwg no			issue
			$F \cap \overline{Z}$	(



2 3D View Front Elevation

CT204 ÉCHELLE / SCALE: OTE 1: ALLOW +/- 500mm TO THE PROPOSED FINISHED FLOOR LEVEL (BUILDING HEIGHT TO TOP OF PLANT NOT TO EXCEED 1 DISCLAIMER: NOTE 3: THE LOCATION OF PROPERTY ALIGNMENTS IS DETERMINED FROM SURVEY INFORMATION PROVIDED BY SURVEYOR. DO NOT SCALE THIS DRAWING. VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING ANY WORK. COPYRIGHT © THIS DRAW.

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 DESCRIPTION

 4
 REVISED FACADE POST COUNCIL MEETING

 5
 ISSUE FOR CLIENT SIGN-OFF

 6
 ISSUE FOR CLIENT SIGN-OFF

 7
 REVISED FIRE SPRINKLER TANKS (3 of)

 8
 REVISED ROOFTOP PARAPET

 9
 REVISED NORTHERN FACADE - CURTAIN GLASS WALL SETOUT AMENDED

 15
 COUNCIL MEETING REVISED WORK IN PROGRESS DRAWING SET

 16
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0.2	scale		A1	
	project	no 220507		
PRELIMINARY	date	20.09.22		
PECTIVE - WEST	dwn	dwg no		issue
	PGT	220507 - CT205		16



VIEW FROM NEW CAMPBELL BRIDGE TO SITE



⁹ REVISED NORTHERN FACADE - CURTAIN GLASS WALL SETOUT AMENDED 15 COUNCIL MEETING REVISED WORK IN PROGRESS DRAWING SET 16 ISSUED FOR CONSULTANT CO-ORDINATION

PROPOSED DEVELOPMENT AS VIEWED FROM BRIDGE

 27.06.22

 05.07.22

 12.07.22

 12.07.22

 20.07.22

 20.07.22

 3D PERSP CANAL 09.09.22 20.09.22

0.2	scale A1	
	project no 220507	
RELIMINARY	date 20.09.22	
ECTIVE - ALEXANDRA	dwn dwg no	issue
	PGT 220507 - CT206	16









CODE	LOCATION
1	PRE-CAST CONCRETE DADC
2	CONCRETE RENDERED MAS & CONCRETE RENDERED SL
3	CONCRETE RENDERED MAS WALKWAY SIGNAGE WALL &
4	PREFINISHED PROFILED ME
5	PREFINISHED PROFILED ME
6	PREFINISHED PROFILED ME
7	PREFINISHED CLADDING - LI
8	PREFINISHED CLADDING - D. (& SLAB SPANDRELS TO LVL
TAL GUARDRA TERNALS STAI	NIL TO PLANT AREA ACCESS +
10	GLAZED WALL WITH ENERGY
11	GLAZED WALL WITH COLOUR
12	GLAZED WALL WITH COLOUR
13	VERTICAL SHADE SCREEN / ATTACHED TO GLAZED WAL
14	METAL BALUSTRADES TO RA
15	EXPANDED METAL SHEET SO
16	CAE ACCENT SOFFIT & VERT 'EYEBROW' (UNDERSIDE & V
17	ROLLER SHUTTER DOORS, A
18	RSD FRAMES, GUTTERS, FA
19	PAINT TO EXTERNAL DOORS
20	PROFILED METAL ROOF SHE
21	BATTEN SCREEN FENCE TO
22	FIRE SPRINKLER & RAINWAT
23	GRASSCRETE PERMEABLE LOADING ZONES TO MAINT

	COLOUR	REFERENCE IMAGES
RIES	EXPOSED WITH ANTLORAFITTI OF EAR COAT FINISH	
STRADE WALLS ROUND LVL)	TO MATCH COLORBOND: 'SHALE GREY'	
ALLS - ENTRY STORAGE RM	TO MATCH COLORBOND: 'MONUMENT'	
WHITE	COLORBOND: 'SHALE GREY'	
HT GREY	Colorbond: 'Windspray' — — — — — — — — — —	
RK GREY	COLORBOND: 'MONUMENT'	
	PANELISED SYSTEM IN COLOUR SIMILAR TO (4)	
	PANELISED SYSTEM IN COLOUR SIMILAR TO (6)	
	TO MATCH COLORBOND: 'MONUMENT'	
G	TO MEET SECTION J REQUIREMENTS POWDERCOATED ALUMINIUM MULLIONS: MONUMENT SATIN $_$ $_$	
K GREY	TO MEET SECTION J REQUIREMENTS AND TO MATCH COLOUR	
WHITE	TO MEET SECTION J REQUIREMENTS	
٧S	TIMBERLOOK: LIGHT / PALE TONE	
	TO MATCH COLORBOND: 'MONUMENT'	
ANT)	COLORBOND: 'SHALE GREY'	
ROJECTING	CAE BLUE: PANTONE '2387 C'	
- OFF WHITE	COLORBOND: 'SURFMIST'	PANTONE
3	Colorbond: 'Windspray' and paint finish match $-\!-\!-$	
	TO MATCH COLORBOND 'SURFMIST'	
	ZINCALUME — — — — — — — — — — — —	
REET FRONT	TIMBERLOOK: LIGHT / PALE TONE	
	GALVANISED METAL	
et front Doors	CONCRETE GRID	

0.2	scale	1:96	A1	
	project	no 220507		
RELIMINARY	date	20.09.22		
S	dwn	dwg no		issue
	PGT	220507 - CT208		16

3D View STREET ELEVATION ÉCHELLE / SCALE:

3D View STREET ELEVATION ENTRY ÉCHELLE / SCALE:

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6	ISSUE FOR CLIENT SIGN-OFF			
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9	REVISED NORTHERN FACADE - CURTAIN GLASS WALL SETOUT AMENDED			
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0.2	scale		A1	
	project I	no 220507		
PRELIMINARY	date	20.09.22		
PECTIVES - BURROWS	dwn	dwg no		issue
	PGT	220507 - CT209		16
	1			

-SIMULATION HALL 1840m2

GFA				
LOCATION	AREA			
GROUND LEVEL	3253 m²			
LEVEL 1	1629 m²			
LEVEL 2	1627 m²			
Grand total	6510 m²			
 GFA MEASURED TO 'STANDARD INSTRUMENT' DEFINITION. GFA MEASURED TO INSIDE FACE OF EXTERNAL WALLS. EXCLUDED: SERVICES RISERS AND VOIDS, PLANT ROOMS, VERTICAL CIRCULATION (STAIRS AND LIFTS). 				
FLOOR SPACE RATIO	(%) 80.22			

0.2	scale	1:500	A1	
	project	no 220507		
RELIMINARY	date	20.09.22		
٧S	dwn	dwg no		issue
	PGT	220507 - CT212		16

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