

APPENDIX P OPERATIONAL WASTE MANAGEMENT PLAN

GTK Consulting



Museums Discovery Centre

Operational Waste Management Plan

September 2020

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CONSULTING**

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1.0 Introduction

The report supports a State Significant Development (SSD) Application for the proposed construction and use of a new building to facilitate the expansion of the Museums Discovery Centre (MDC) site at 2 Green Road, Castle Hill.

The primary objective of the SSD Application is to provide expanded facilities to accommodate the Powerhouse collection including spaces for storage, conservation, research and display and spaces to facilitate increased public access to the collection through education, public programs, workshops, talks, exhibitions and events. The expansion of the existing MDC facility within the site at 2 Green Road Castle Hill will integrate with the existing MDC site located at 172 Showground Road, Castle Hill and its operations on a permanent basis.

The proposal is a type of “*Information and Education Facility*” with a Capital Investment Value (CIV) in excess of \$30 million and is classified as SSD under Schedule 1 Clause 13 of the State Environmental Planning Policy (State and Regional Development) 2011 (State and Regional Development SEPP).

Create Infrastructure is the proponent of the SSD Application.

2.0 Background

The MDC is owned and operated by the Museum of Applied Arts and Sciences (MAAS) and features exhibitions and displays in collaboration with Australian Museum and Sydney Living Museums, who also maintain collection storage and conservation facilities on the site. The MDC is located at 172 Showground Road, Castle Hill. There are six buildings primarily providing collection storage as well as areas for displays and education and public programs, accessible to visitors (Building E). During 2017-2018 a total of 17,481 persons visited the MDC site.

The MDC Expansion is part of the renewal of the Museum of Applied Arts and Sciences, known as the Powerhouse Program, that includes:

- **Powerhouse Parramatta:** A new benchmark in cultural placemaking for Greater Sydney that will be a symbol of a new approach to creative activity and engagement.
- **Powerhouse Ultimo:** The NSW Government recently announced that the Museum’s Ultimo site will be retained, and the Museum will operate over four sites across the Greater Sydney area.
- **Powerhouse Collection Relocation and Digitisation Project:** The relocation of the Powerhouse collection and digitisation of around 338,000 objects, enhancing the collection’s accessibility for local, national and international audiences.

The MDC expansion is an integral component of the Powerhouse Program and will provide the opportunity to increase visitation to the site, forming an important and significant cultural institution within The Hills Shire. In addition to the storage component of the proposal, the expansion will increase access to the Powerhouse collection through a range of spaces for visible storage, research and viewing of the collection, as well as flexible spaces for education and public programs, workshops, talks, exhibitions and events.

3.0 Site Description

The proposed Building J site is located within the property known as 2 Green Road, Castle Hill which comprises a single lot legally described as Lot 102 DP 1130271. The site is generally square in shape with a splay corner to the intersection of Green Road and Showground Road and a total area of approximately 3.8ha. The site has a primary frontage of approximately 183m to Green Road and a secondary frontage of approximately 186m to Showground Road. Refer to **Figure 1**. The location of the proposed new MDC building (to be known as “Building J”) is located on the western end of the site and is marked on **Figure 1** in a dashed yellow line (referred as the Building J Site). The overall site contains large institutional buildings set within a landscaped setting featuring a high tree canopy.

The overall site is a TAFE campus that caters for approximately 400 enrolled students, and provides courses on business and financial services, hospitality, general education, community services, health, nursing, carpentry, building and retail. The site currently includes TAFE buildings, car parking and vegetated open space areas. A dam is situated in the north eastern part of the site.

The MDC site is located immediately west of the existing TAFE site at 172 Showground Road, Castle Hill. A subdivision application (included within this SSD Application) will consolidate the site of the proposed Building J with the existing MDC site. The main public vehicle access to the MDC site is via Windsor Road. There is also a vehicular access point to the MDC on Showground Road. The MDC and TAFE have a longstanding arrangement, that permits vehicle access to the MDC site from Green Road, allowing vehicles to traverse across the TAFE site to access the MDC site.

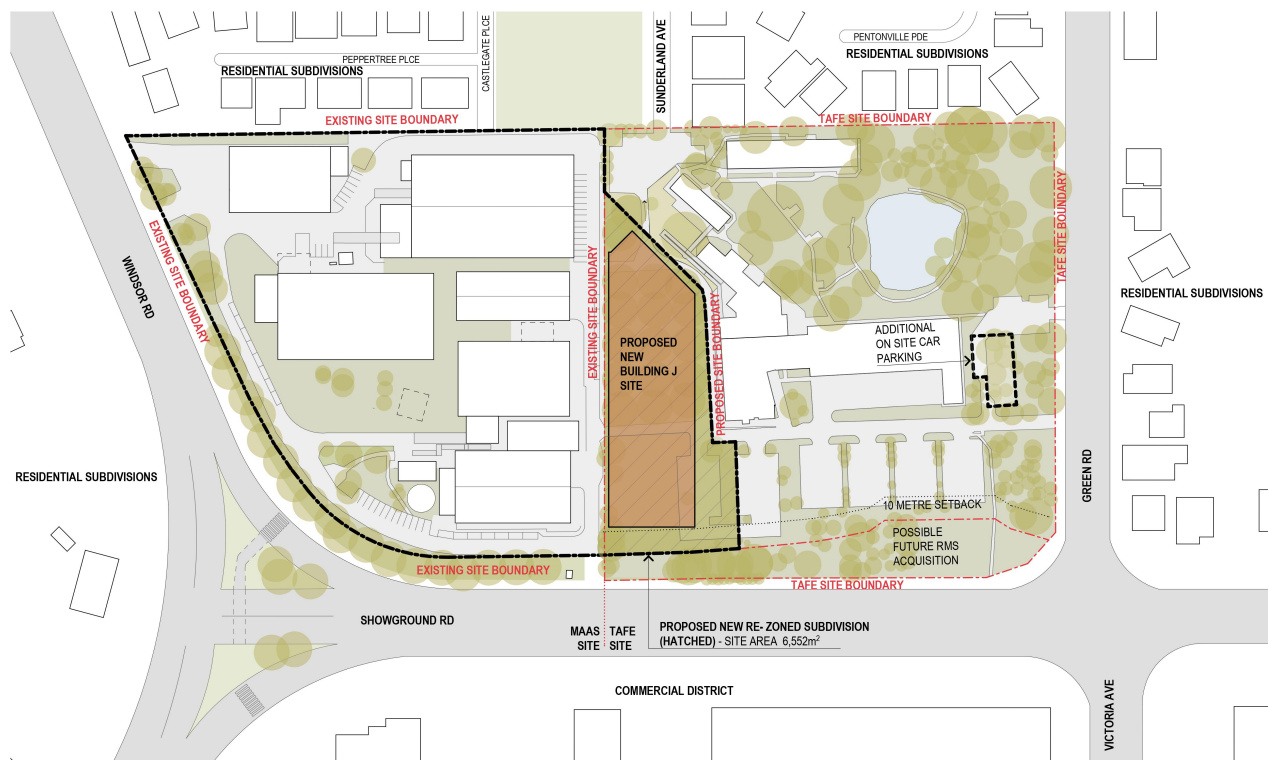


Figure 1: Existing site layout plan and proposed development site
Source: Lahznimmo Architects

Development surrounding the site to the east, and north consists of established residential neighbourhoods generally comprising two storey detached dwellings. Opposite the site to the south east and south west are a mix of warehouses, industrial units, and large format bulky goods retail premises. Views into the TAFE and MDC site from the surrounding roads is obscured by dense trees and vegetation along the perimeter of the sites.

A public park and children's playground is adjacent to the north of the site that is bound by Sunderland Avenue to the east and Castlegate Place to the west. The dwellings along Sunderland Avenue and the southern side of Pentonville Parade are the nearest residential properties to the proposed Building J site.

4.0 Overview of Proposed Development

The successful delivery of this SSD project supports a priority cultural infrastructure project and is a NSW Government 2019 election commitment (Powerhouse Precinct at Parramatta). This application will deliver a significant cultural institution for Castle Hill and The Hills Shire.

The proposed Building J will offer many opportunities for public engagement as part of a desire to increase public access to the Powerhouse collection. The renewal of the site offers a range of opportunities to increase public access including visible storage facilities, booked tours, Open Days, public and education programs, workshops, talks and other events. The facilities in Building J will serve the needs of a variety of user groups including staff, volunteers, education groups, researchers, artists, scientists, industry partners and the general public.

The SSD Application seeks consent for the delivery of the MDC expansion as a single stage, comprising:

- Site preparation works, including the termination/relocation and installation of site services and infrastructure, tree removal (337 trees in total), earthworks, and the erection of site protection hoardings and fencing.
- Demolition of existing car park and vehicle accessway along the eastern and north eastern parts of the site. A new at-grade car park is proposed to be constructed on the eastern side of the TAFE site and will accommodate 24 car parking spaces removed from the Building J site.
- Construction of the proposed new Building J. The proposed new Building J will cater for the following uses:
 - Storage for the Powerhouse collection and archives (both collected archives and institutional archives).
 - Flexible spaces for education and public programs, workshops, talks, exhibitions and events.
 - Suites of conservation laboratories and collection work spaces.
 - Photography, digitisation and collection documentation facilities.
 - Work space for staff, researchers, industry partners and other collaborators. This will include amenities, meeting and storage rooms, collection research and study areas as well as other ancillary facilities.
 - Components of the image and research library.
 - Object and exhibition preparation, packing, quarantine and holding areas.
- Construction of new vehicle accessways to maintain connectivity to the MDC and TAFE sites.
- Subdivision of the proposed Building J site from the TAFE site including creation of right-of-carriageway easement to facilitate access over the new realigned accessway by TAFE vehicles and consolidation to form a single lot with the existing MDC site.

5.0 Assessment Requirements

The Department of Planning, Industry and Environment have issued Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement for the proposed development. This report has been prepared having regard to the SEARs as follows:

SEAR	Where Addressed
12. Servicing and Waste The EIS shall: <ul style="list-style-type: none">• identify, quantify and classify the likely waste streams to be generated during construction and operation of the development and describe the measures to be implemented to minimise, manage, reuse, recycle and safely dispose of this waste with reference to relevant guidelines	Waste streams, quantities and classifications are identified in section 7. Measures to minimise, manage, reuse and recycle waste are detailed at section 8. Measures to safely dispose of waste are detailed in section 9. Construction waste is detailed within the Construction Environmental Management Plan appended to the EIS.
<ul style="list-style-type: none">• identify appropriate servicing arrangements (including but not limited to, waste management, loading zones and mechanical plant) for the site.	Servicing arrangements for waste are detailed at section 9

6.0 Guidelines

6.1 Protection of the Environment Operations Act, 1997 (NSW)

The *Protection of the Environment Operations Act* 1997 outlines requirements for generators of waste in terms of storage and correct disposal. The Powerhouse Museum must comply with the Act, in particular in relation to use of hazardous chemicals and materials that would be used in the conservation of the collection.

6.2 Waste Avoidance and Resource Recovery Act 2001

The objectives of the *Waste Avoidance and Resource Recovery Act* 2001 are to:

- (a) to encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development,*
- (b) to ensure that resource management options are considered against a hierarchy of the following order—*
 - (i) avoidance of unnecessary resource consumption,*
 - (ii) resource recovery (including reuse, reprocessing, recycling and energy recovery),*
 - (iii) disposal,*
- (c) to provide for the continual reduction in waste generation,*
- (d) to minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste,*
- (e) to ensure that industry shares with the community the responsibility for reducing and dealing with waste,*
- (f) to ensure the efficient funding of waste and resource management planning, programs and service delivery,*
- (g) to achieve integrated waste and resource management planning, programs and service delivery on a State-wide basis,*
- (h) to assist in the achievement of the objectives of the Protection of the Environment Operations Act 1997.*

The operational plans of Powerhouse Museum will be developed to comply with the Act.

6.3 The NSW 20-year waste strategy

The NSW Department of Planning, Industry and Environment is developing a 20-Year Waste Strategy. The guiding principles of the strategy revolve around three focus areas, which are:

- Sustainability
- Reliability
- Affordability

A discussion paper has been prepared and exhibited for public comment. This will be followed by a draft strategy that will be released for further comment.

The operations of Building J by Powerhouse will be informed by the draft and final strategies under this program.

7.0 Waste Streams

The proposed Building J will generate waste through office and conservation uses. Whilst the gross floor area (GFA) of the building is significant, only a small portion of the GFA will maintain waste-producing uses. All storage areas will produce no waste as the functions within these spaces is for storage and storage-display of objects only.

In order to calculate waste volumes from Building J, the City of Sydney's *Guidelines for Waste Management in New Developments*, 2018, has been utilised. The waste volumes are generated for staff areas or areas in which staff activities are likely to produce waste.

Type of Waste	Source	Anticipated volume/ Day
Co-mingled recyclables	Office areas, conservation laboratory	Office- 150L Conservation- 210L
General waste	Office areas, conservation laboratory	Office- 90L Conservation- 126L
Toner cartridges	Office areas	Office- as utilised
Food/ organics	Office areas	Office- 30L Conservation- N/A
Hazardous solid and liquid waste	Conservation laboratory	Conservation- as utilised
Batteries	Office areas	Office- as utilised

Waste generation rates for conservation areas have been calculated using office rates as a comparative use is not contained within the Guideline. As such the estimates waste volumes are considered conservative and are unlikely to be met.

The conservation areas will maintain intermittent use, based on the programs and projects being undertaken by the Powerhouse Museum. As such there may be times when the conservation areas are not utilised at all and other times where work being undertaken does not generate waste of any kind. It is noted that normal office functions and food and drink consumption do not take place within conservation areas.

It is noted that existing operations of the Powerhouse produce less than 10L of hazardous solid or liquid waste per week.

8.0 Sustainability Measures

In accordance with the sustainability objectives for the project, waste management and monitoring will be integrated into the use of the Building. Separation of waste streams will be undertaken by staff through provision of separate waste bins within the office and conservation areas. Furthermore, the Powerhouse will introduce targets for waste reduction in operation and monitor waste generation throughout the entire site. Through such monitoring targets can be set and continually refined to divert waste from landfill.

9.0 Waste Storage and Servicing

As outlined in section 7, Building J will not generate significant sources of waste. The waste servicing strategy for Building J will be undertaken in accordance with waste servicing for the remainder of the Museums Discovery Centre site. This includes 3x weekly collection by a private contractor from the central waste bins located adjacent to Building A.



Figure 2: Museums Discovery Centre bulk waste storage location
Source: Powerhouse Museum

Non-putrescible waste will be stored within a 240L bin located in both the office and conservation areas of Building J. These bins will be emptied by service staff to the central bins adjacent to Building A as required. All putrescible waste will be emptied daily to the central bins.

Hazardous waste, toners and batteries will be collected on an as needs basis through the Building J loading dock. The frequency for these collections is considered low and will be dependent on the activities of the staff as well as programs and projects being undertaken by the Powerhouse Museum.

A summary of the servicing requirements for waste from Building J is as follows:

Type of Waste	Storage requirement	Servicing
Co-mingled recyclables	Office- 1x 240L bin Conservation- 1x 240L bin	As part of existing site servicing
General waste	Office- 1x 240L bin Conservation- 1x 240L bin	As part of existing site servicing
Toner cartridges	Toner bin collocated with printers	Collected by dedicated contractor directly from building
Food/ organics	1x 60L bin	As part of existing site servicing
Hazardous solid and liquid waste	Conservation- dangerous goods cabinet within laboratory	Collected by dedicated contractor directly from building
Batteries	Office areas- dedicated bin near printers	Collected by dedicated contractor directly from building

10.0 Conclusion

Operational waste from Building J will be managed in accordance with the waste management strategies currently in place for the Museums Discovery Centre site. Despite its size, Building J will not generate significant amounts of waste. The main sources of waste will be from the office areas with some waste being generated by conservation areas.

The volume, servicing and storage of waste for Building J can be suitably managed on site and in accordance with existing arrangements for the site.