

# CONSTRUCTION MANAGEMENT PLAN

State Significant Development Application  
Taronga Wildlife Hospital- Nutrition Centre

NUTRITION CENTRE  
V2  
December 2021

## CONSTRUCTION MANAGEMENT PLAN

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Rebecca White, on behalf of Mark Owens

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# 1 INTRODUCTION

## 1.1 OVERVIEW

In developing the Construction Management Plan for the Taronga Wildlife Hospital, Sydney Nutrition Centre (TWHNC), Taronga Conservation Society Australia confirms its commitment to ensuring a safe work site for its employees, contractors, suppliers, subcontractors, visitors, pedestrians and the travelling public.

This Plan allows for reasonable disruption (e.g., noise, dust, vibration) for the respective contractors during the construction of the TWHNC. However, provides guidance to ensure this is appropriately managed throughout with minimum disruption to staff, visitors and the wider community.

This Plan ensures that the Works Contractors understand:

- The Construction Phasing and scope of works;
- General management of the site;
- Waste management plan;
- Access Plan;
- Communication Plan;
- Record keeping; and
- Emergency procedure.

This Plan shall be revised to consider altered or unexpected site conditions. In such instances, an addendum to the Plan will be issued to all copy holders to reflect such changes.

## 1.2 PURPOSE

This Construction Management Plan Report accompanies a SSDA outlining the approach to be taken for managing the following construction works:

### Stage 1 – Nutrition Centre

1. Demolition of existing concrete slabs
2. Removal of existing trees and shrubs;
3. Creation of temporary road access to area;
4. Construction of pedestrian tunnel under existing access road;
5. Construction of new Nutrition Centre including back of house;
6. Other supporting infrastructure and walkways; and
7. New landscaping

\*Demolition the existing structures on site are excluded from this scope as these works will be completed as exempt development

### Stage 2 – Wildlife Hospital

1. Forms part of a separate SSDA

This CMP ensures that possible impacts that may arise from the works have been appropriately identified, managed and minimised.

### 1.3 BACKGROUND

The project consists of two main components:

- Construction of the new Nutrition Centre; and
- Construction of the new Wildlife Hospital (separate SSDA)

The two stages have a combined construction budget of \$27m.

The new Nutrition Centre will be constructed as Stage 1 in the location of the existing Nutrition stores and preparation area. The existing stores and preparation area is limited in capacity and no longer meets operational requirements.

The new Wildlife Hospital will be constructed in Stage 2 in the location of the existing Serpentaria Exhibit, the current exhibition for reptiles and amphibians at Taronga Zoo. The Serpentaria Exhibit has reached the end of its useful life and has been identified for relocation and rebuild. A suitable site has been identified within the grounds of the zoo and construction is intended to commence in early 2022. With the Serpentaria Exhibit located to another part of the site, this area can be used for the new Wildlife Hospital (Stage 2)

The project has been streamlined into two SSDA applications to support an accelerated construction process that is intended to be put in place. The purpose of an accelerated design and construction program is to take advantage of the downturn of the Taronga Zoo business due to COVID-19 and enable the zoo to be in the best possible position to welcome guests when business returns to former normal levels.

This accelerated design and construction program will be of benefit to Stage 1, the Nutrition Centre given it does not have interdependencies on the progress of construction sites elsewhere in Taronga Zoo. However, it is noted the construction of Stage 2 is dependent on the progress of the new Reptile and Amphibian Centre.

### 1.4 CURRENT PROJECTS AT TARONGA ZOO

#### 1.4.1 Upper Australia Precinct

Approval was granted in December 2019 for the development of the Upper Australia Precinct at Taronga Zoo.

The SSDA sought consent for the redevelopment of an animal exhibit known as the 'Upper Australia Precinct', which will complete the entire Australian Precinct, including key attractions such as the Nocturnal House, Macropod walk and the commercial Koala Encounters venue.

The Upper Australia Precinct is one of the pillars of Taronga's Centenary Capital Plan and will be a major tourist destination for international tourists to view Australian wildlife. The renewal of this area of the zoo will enhance the native landscape strategy of the existing precinct and greater communicate the connection of wildlife and the environment.

The development aims to enhance the guest experience and presentation of Taronga Zoo with a focus to improve the welfare of animals. The proposed works will completely refurbish the existing Upper Australia Precinct, including a new exhibit design and layouts. This will include demolition of existing structures and some excavation works, while remaining sympathetic to the design intent of the original 1970s exhibits.

The Upper Australia Precinct will display critically endangered Australian animals that form part of Taronga's wildlife conservation and education programs and upgrade "star" attractions including kangaroo, koala, platypus, wombat and emu exhibits. The development will incorporate three main exhibits:

- Reconfiguration of the existing Nocturnal House building;
- Construction of a new Koala Encounter and public koala canopy walk; and
- Extension of the Macropod walkthrough to replace the existing wetland area.

Development application for the early works including site preparation and demolition of Platypus house and surrounding pathways was lodged 9 July 2020 and approved 19 September 2020.

State Significant Development application was approved 21 December 2020.

Early works for the Upper Australia Precinct are scheduled to commence July 2021 with construction works to follow commencing October/November 2021.

### 1.5 Reptile and Amphibian Conservation Centre

As noted above, the current exhibit has reached the end of its useful life and has been identified for relocation and rebuild. A suitable site was identified near the Elephant temple, and construction is intended to commence in early 2022.

The new Reptile and Amphibian Conservation Centre, housing both an exhibition and animal care facility, is set to improve operational efficiencies and safety for employees and the visiting public.

The project consists of two main components:

- Construction of the new Reptile and Amphibian Conservation Centre; and
- External landscaping works.

A SSDA has been submitted and is expected to be approved by the end of 2021.

Early works for the Reptile and Amphibian Conservation Centre are scheduled to commence in late 2021 with construction works to follow in early 2022. There is expected to be an overlap of the Upper Australia Precinct construction works in 2022, which will be effectively managed by the assigned Contractors and Project Managers.



## 2 SITE LOCATION AND ACCESS

### 2.1 TARONGA ZOO

Taronga Zoo is located at Bradleys Head Road at the southern end of Mosman on the Bradleys Head Peninsula. The zoo is approximately 28 ha and is legally described as Lott 22 in DP 843294.

The zoo is located within the Mosman Local Government Area.

The site is bounded by:

- Whiting Beach Road to the north.
- Bradleys Head Road to the east;
- Athol Wharf Road and Sydney Harbour to the south; and
- Little Sirius Cove to the west.

**Figure 1: Map of site**



Access is from Bradleys Head Road which extends alongside the entire eastern boundary of the zoo grounds.

### 2.2 NUTRITION CENTRE

Stage 1 is the construction of a Nutrition Centre. The site is located at the staff/delivery Security entrance to the zoo (**see Figure 2**).

The site incorporates existing one storey buildings currently utilised as stores and food preparation areas.

This area of the site is not accessible by visitors and is back of house.



Figure 2: Location of the Nutrition Centre



Figure 3: Photos of area of Nutrition Centre



## 2.3 ACCESS

Taronga Zoo is located on Bradley's Head Road, and is easily accessible by various modes of transport:

### 2.3.1 PUBLIC TRANSPORT

#### Ferry

- Taronga Zoo Sydney is 12 minutes from Circular Quay by ferry. Sydney Ferries services depart Circular Quay every 30 minutes.

#### Bus

- The 430 Bus travels to Taronga Zoo Sydney every 10 - 15 minutes from Central, Town Hall and Wynyard train stations;
- Northern suburb bus routes can change at either Spit Junction or Mosman Junction to join the M30 to the Zoo; and
- The 238 bus route travels between Balmoral Beach, the Taronga Zoo Sydney main entrance and the Taronga ferry wharf on the water's edge for passengers arriving or leaving by ferry

#### Train

- Passengers can change at Circular Quay train station and join the ferry to Taronga Zoo Sydney.

### 2.3.2 PRIVATE TRANSPORT

Parking is available at Taronga Zoo Sydney, entry from Bradleys Head Road.

## 2.4 ACCESS AROUND THE ZOO

Stage 1 – The Nutrition Centre – is not accessible to pedestrians and is considered back of house. The area can be accessed by zoo staff via car or pedestrian roads.



**Figure 4 – Access to Nutrition Centre**



Figure 5: Taronga Zoo Site Map





### 3 DESCRIPTION OF WORKS

#### 3.1 STAGE 1 - NUTRITION CENTRE

The TWH SSDA development (works) will include the construction of a new Nutrition Centre with the creation of an underground tunnel which will connect to Stage 2 – Wildlife Hospital.

The works will include the following:

- **Level Two: Nutrition Centre** – Construction of the level two nutrition area to be approx. 716sqm. This area will house freezers, stores, cool rooms, foot prepare area, wash bay and equipment. Entry will be via level three; and
- **Level Three: Nutrition Centre** – Construction of the level three nutrition area to be approx. 882.1sqm. This area will house animal stores, loading dock and preparation areas as well as staff offices, meeting rooms and kitchenette. Entry will be via the ramp from level two at the rear of the building and exit via a second ramp to the main entrance on level one;
- Creation of a tunnel between the Nutrition Centre and Stage 2 Wildlife Hospital
- Other supporting infrastructure including landing and vehicular access area; and
- New landscaping.

The Proposed Site Plan is shown on drawing AA052 prepared by Design Worldwide Partnership (DWP) Architects.

**Figure 6: Proposed Site Plan**



## 4 STAGE 1 NUTRITION CENTRE - CONSTRUCTION PHASING

The following construction sequence is based upon the current design and may be subject to change upon conditions derived after the SSDA. This sequence will be amended to suit the SSDA as well as discussions with the appointed Contractor.

The proposed construction sequence is as follows:

- **Pre-construction Activities (Phase 1):**
  - Notifying residents and Taronga stakeholders;
  - Erection of tree protection, site hoarding, signage and site amenities; and
  - Set up of site office and contractor facilities (proposing to use the staff car park at Taronga Zoo Security Entrance).
- **Demolition Activities (Phase 2 – Site Preparation):**
  - Demolition existing buildings; and
  - Preparation of temporary access ramp
  - **Phase 3 Stage 1 – Tunnel** – Construction of the proposed tunnel between the Nutrition Centre and Wildlife Hospital once buildings are demolished and temporary ramp is established past construction site. Once constructed tunnel to be closed off to prevent access until Stage 2 – Wildlife Hospital is completed.
- **Construction Activities (Phase 3 – Construction):**
  - **Phase 3 Stage 2 – Nutrition Building:**
    - **Level Two: Nutrition Centre** – Construction of the level two nutrition area to be approx. 716.2sqm. This area will house freezers, stores, cool rooms, food prepare area, wash bay and equipment. Entry will be via level three; and
    - **Level Three: Nutrition Centre** – Construction of the level three nutrition area to be approx. 882.1sqm. This area will house animal stores, loading dock and preparation areas as well as staff offices, meeting rooms and kitchenette. Entry will be via the ramp from level two at the rear of the building and exit via a second ramp to the main entrance on level one;
    - **Nutrition Centre Plantrooms** – Construction of the rooftop plant areas. This area will house HVAC equipment to service the Nutrition Centre (including coolrooms) in addition to providing additional capacity for services key elements of the future Hospital
    - Other supporting infrastructure including pedestrian walkways, landing and vehicular access area; and
    - New landscaping.
- **Post Construction Activities (Phase 4)**
  - Removal of existing site hoarding and tree protection measures;
  - Cleaning and finishing works; and
  - Inspections.

Upon the contracting of the project builder this sequence may change, any changes will be documented in the Final Construction Management Plan.

The general scope of works and activities will be carried out as per the construction sequence and the sections below will further explain the items detailed in the construction sequence and their timings on site.

Please note that we have not given specific dates as it is not currently known when the SSDA will be approved.

We have categorized the community impacts as follows:

- **Very Minor or Minor** – Light or duties with very minimal impact or noise. Increase of personnel for short periods.
- **Medium** – Higher level of noise with small tools or small excavation equipment up to 8 tonnes. Increase in personnel for duration of construction with spikes in personnel on occasions.
- **High** – Heavy machinery above 8 tonnes, heavy breaking using hydraulic breakers for prolonged periods. Increase in truck movements for removal of material.

## 4.1 STAGE 1 – NUTRITION CENTRE

### 4.1.1 PRE-CONSTRUCTION ACTIVITIES (PHASE 1)

Table 1: Pre-Construction Activities

Phase 1				
Item	Details	Timing/Duration	Community Impacts	Mitigation measures
Notification to residents of commencement of activities	This will be carried out in advance of starting any activity on site and is good practice to let the near-by residents know what's going to happen and when. Contact details of personnel responsible for the construction will be included in the notification.	2-4 weeks before starting on site.	None - positive communication.	None required.
Erection of tree protection, site hoarding, signage and site amenities	Minor clearing might be carried out to erect the site fence and install the site amenities. Site amenities to be located as detailed in Section 5.  Minor traffic impact as vehicles enter site to provide the portable building and connect to existing services.	Start of project for 1 week duration.	<b>Minor</b> - some vehicles requiring entry to the site. Slight impact to passing pedestrians and staff as pedestrian routes are amended.	Keep staff and visitors informed with flyers and notice board. Brief construction personnel of their responsibility. Ensure correct signage is erected.
Set up of site office and contractor facilities	This will be within the staff car park, adjacent to the security entrance. Smaller compounds may be set up around the site.	Start of project for 1 week duration.	<b>Minor</b> - some vehicles requiring entry to the site. Slight impact to passing pedestrians and staff as pedestrian routes are amended.	Provide alternative routes for pedestrians. Ensure signage and site hoarding is in situ.



#### 4.1.2 DEMOLITION / SITE PREP ACTIVITIES (PHASE 2)

It should be noted that the demolition works required does not form part of the SSDA, as the demolition of structures can be undertaken as exempt development. The concrete slab will remain.

**Table 2: Demolition Activities**

Phase 2				
Item	Details	Timing/Duration	Community Impacts	Mitigation measures
Preparation of temporary access ramp	Access to be provided next to existing road to allow for excavation works to start under road for tunnel	2 weeks	<b>Medium</b> - trucks used for removal of unused materials.	Environmental impact measures to be employed (dust suppression for concrete items). Traffic management to be used to handle large amounts of trucks. Limit truck movements to before 0930 and after 1400 during Taronga Zoo opening hours.
Excavation of tunnel	Tunnel to be constructed under road to future proof the connection between Stage 1 and 2	4 weeks	<b>Medium</b> - trucks used for removal of unused materials.	Environmental impact measures to be employed (dust suppression for concrete items). Limit use of heavy breakers with respite periods. Traffic management to be used to handle large amounts of trucks. Limit truck movements to before 0930 and after 1400 during Taronga Zoo opening hours.

### 4.1.3 CONSTRUCTION ACTIVITIES (PHASE 3)

Table 3: Construction Activities

Phase 3				
Item	Details	Timing/Duration	Community Impacts	Mitigation measures
Level Two – Nutrition Centre	Construction of the level two nutrition area to be approx. 716sqm. This area will house freezers, stores, cool rooms, foot prepare area, wash bay and equipment. Entry will be via level three.	20 weeks.	<b>Medium</b> - at the commencement of works in each area there will be disturbance from material delivery and the need for more contractors on site. As construction progresses some vehicles requiring entry to the site will require traffic management. Slight impact to passing pedestrians and staff inside Taronga Zoo as pedestrian routes are amended. Some construction noise within the Zoo from increased level of activity. This will decrease as work reaches fit out stage.	Vehicle access established into site and traffic to be managed as vehicles required access. Once material is on site, minor vehicle movement around Taronga Zoo.
Level Three: Nutrition Centre	Construction of the level three nutrition area to be approx. 882sqm. This area will house animal stores, loading dock and preparation areas as well as staff offices, meeting rooms and kitchenette. Entry will be via the ramp from level two at the rear of the building and exit via a second ramp to the main entrance on level one.	16 weeks.		All works carried out in daytime work hours. Environmental impact measures to be employed throughout.
Roof: Nutrition Centre	Construction of the rooftop plant areas. This area will house HVAC equipment to service the Nutrition Centre (including coolrooms) in addition to providing additional capacity for services key elements of the future Hospital	8 weeks		
Supporting Infrastructure and Landscaping	Pedestrian walkways, landing and vehicular access	6 weeks.	<b>Minor</b> - some vehicles requiring entry to the site. Slight impact to passing pedestrians and staff as pedestrian routes are amended.	Keep staff and visitors informed with flyers and notice board. Provide alternative routes for pedestrians. Ensure correct signage is erected.

### 4.1.4 POST CONSTRUCTION ACTIVITIES (PHASE 4)

Table 4: Post Construction Activities

Phase 4				
Item	Details	Timing/Duration	Community Impacts	Mitigation measures
Removal of site hoarding and tree protection measures	Removal of all site hoarding and tree protection measures.	1 weeks.	<b>Minor</b>	All works will be contained on site with minor truck movements required.

### Phase 4

Cleaning and finishing works	Cleaning of site.	3 weeks.	<b>Minor</b> - small number of people all contained on site.	All works will be contained on site with minor truck movements required.
Inspections and post construction activities	Final inspections by authorities and client.	6 weeks.	<b>Minor</b> - small number of people all contained on site.	All works will be contained on site.

## 4.2 CONSTRUCTION DURATIONS

The total duration for the construction program is approximately 11 months but is subject to weather conditions and standard stoppages at Easter and Christmas.

It is not possible at this time to give a full programme of works or firm dates until the SSDA has been approved and a Contractor has been appointed.

It is likely that some of these activities slightly overlap and this has been allowed in the overall duration.

In addition, Stage 2 starting is dependent on the Reptile and Amphibian Conservation Centre elsewhere within Taronga Zoo completing to allow work to commence.

All heavy breaking will be carried out with periods of respites as per the environmental management plan.

## 5 GENERAL MANAGEMENT

### 5.1 SITE ESTABLISHMENT

Taronga will ensure suitable and safe access, including any applicable social distancing precautions, is maintained at all times around the site for staff, and visitors by the Contractor, including but not limited to the preparation of, and consultation regarding, the maintenance of an Access Plan which, shall incorporate:

- Temporary signage around the site at key locations accessible to visitors (indicatively shown with a 'S' on the plan below);
- Temporary pedestrian crossing, paths and ramps (if required);
- Hoardings and protective screens and covers (as shown in indicatively in red and blue on the plan below); and
- Temporary lighting.

The above measures will be installed by the Contractor prior to the commencement of works.

**Figure 7: Proposed location of signage and hoarding/screens/covers for Stage 1**



### 5.2 SITE SIGNAGE

Shade cloth to site fences, hoardings and any permanent fencing that forms part of the site boundary. Contractors are not allowed use their company branding on Taronga construction sites.

Details of the proposed cover covering the extent and design is to be developed by Taronga and will be placed at key locations at the normal entrances and pedestrian routes.

### 5.3 SITE SECURITY

The Contractor will secure the boundaries of the site for the duration of works. The external area will be fenced off using temporary fence panels 1.8m to 2.4m in height. Banner mesh (shade cloth – 90% shade factor) will be placed on the site screens and hoarding to help minimise dust and present a clean and well managed site.

All temporary hoarding with banner mesh installed at the site shall be constructed to eliminate risk of a fence blowing away due to high winds. Mitigation while installation is carried out by the Contractors will include:

- Install additional bracing every second panel instead of the standard every third panel;
- Install additional counterweights to the bracing;
- Limiting the length of straight runs in the layout of the hoarding, i.e., corners add additional bracing; and
- Check hoarding regularly for stability and compliance with safety regulations.

Appropriate site safety signage will be displayed at all access points to the site warning staff, visitors and the general public that an area which is fenced and/or hoarded off is a construction site.

All access points allowing entry to the demolition and construction site will always be locked. The Contractors will consult with Taronga to determine an appropriate employee to be authorised to allow access to the construction site in emergency situations by emergency services teams only.

An Emergency Site Access procedure will be implemented and will be issued to the Contractor for use after normal hours. Where Taronga allows access to the construction site by emergency services teams for an emergency, Taronga must notify the Contractors immediately, and thereafter provide in writing the date and time they have entered the site and an explanation of the emergency.

Taronga staff will not be able to access the construction site unless prior arrangements have been made with the Contractor. If access is granted for Taronga staff, the staff member must be accompanied by the Contractor and/or be inducted. It is also recommended that Taronga staff wishing to gain access to the construction site during the project, undertake the Building Industry Induction Course and obtain a white card.

### 5.4 DAILY TASKS

#### 5.4.1 Prior to Work Commencing

The Contractor's Supervisor will always carry out the following operations to ensure acceptable safety prior to the commencement of work each day:

1. Induct any new contractors;
2. Daily prestart toolbox talks with Subcontractors;
3. Check qualifications, licences and tickets where required; and
4. Review SWMS for sub contractors.
5. Inspect all signs and devices, note any signs out of place or damaged overnight and rectify as soon as possible;
6. Inspect all emergency and pedestrian egress paths and ensure that they are clear of construction plant and materials;
7. Make the programmed adjustments to the site management provisions for the day. Check for safety and effectiveness by an inspection around the job; and
8. Maintain, regularly clean and repair or replace signs and devices as necessary.

#### 5.4.2 During Hours of Work

The Contractor's Supervisor will:

1. Attend to problems as they occur;



2. Where there are hazards to staff and public, the Contractor's staff will ensure these are attended to immediately;
3. Reposition barriers and signs as necessary; and
4. Co-ordinate maintenance of access paths, footpaths with other job operations.

### 5.5 TARONGA INDUCTION

Contractors, key employees and subcontractors where appropriate must attend an induction process at Taronga conducted by the Principal's Representative at the beginning of the Contract.

In addition, the Contractor must conduct an induction process for all employees and Subcontractors not previously inducted. All work must always be supervised by an inducted person.

### 5.6 HOURS OF WORK

Contractors must make prior arrangements with the appropriate Taronga personnel for themselves, their employees, subcontractors and suppliers to enter the zoo grounds.

Contractors, employees, subcontractors and suppliers must report to the Taronga Security Officer at the booth in the Goods and Services Entrance at the intersection of Prince Albert Street and Whiting Beach Road. Once construction work is underway, this will remain as the entrance to the site and location of the contractor's site office.

Contractors are advised to not use the visitors or other entrances to the zoo, except with the prior approval of the Principal's Representative.

Access to the Site and normal working hours are limited to the hours of:

- 7.00am to 5.00pm on Monday to Friday; and
- 8.00am to 1.00pm on Saturday.

However, this may be subject to change following receipt of the SSDA approval for these works.

The Principal's Representative may authorise variations outside those hours at such times and under such conditions as the Principal's Representative sees fit.

Out of hours work will be considered for special applications only when it becomes necessary. Relevant authority approvals will be obtained by the Contractor prior to any work being performed outside the approved development consent working hours.

Working outside these hours will only be considered by the Contractor where:

- It is an emergency;
- A situation that would create hazardous conditions;
- Plant breakdowns have delayed an activity that cannot be stopped; and
- The extended working hours will not impact on Taronga operations.

The Contractor will ensure that the Taronga representative and the relevant government authority are notified of this work with the details and the reasons for performing outside the designated hours. No work will proceed outside of hours without the prior approval of Taronga.

The following criteria are set up for the project to ensure the hours of operation remain appropriate throughout the works:

**Table 9: Hours of Operation**

Parameter	Measurement	Criteria/KPI
Construction noise	Monday to Friday 7am – 5pm Saturday 8am – 1pm Boundary with nearest Users	No breaches.

### 5.7 SAFETY EQUIPMENT

Contractors are always required to wear hard personal protective equipment on site including hard hats, appropriate PPE clothing and steel toe boots.

Contractors, employees and subcontractors must have suitable identification such as company cards/tags which should be clearly visible or produced on demand, or wear company clothing.

Contractors must maintain all tools, plant and equipment in safe working condition. There is a requirement to ensure all electrical equipment is checked and tagged monthly before use on site.

### 5.8 HOT WORK

Before Contractors undertake any hot work on site, they must obtain Hot Work Permits, as required by Australian Standard AS 1674.1 1997 "Safety in welding and allied process - Fire precaution". Hot Works will be detailed in the Contractors "Safe Work Method Statement".

### 5.9 NO SMOKING POLICY

Taronga is a smoke free workplace. Smoking is not permitted within the site except where the Principal's Representative has approved a "Designated Smoking Area", which is to be clearly sign posted. This area is to be located away from flammable materials, visitors and animals and will be outside the site boundary of the zoo.

Contractors will comply with Taronga's Policy and ensure there is no smoking on site including site offices and subcontractor facilities.

### 5.10 FIRST AID

The Contractor is required to provide a regularly serviced First Aid kit and register. A First Aider must always be on site.

Taronga will provide Occupational First Aid assistance if required. The number for emergencies is 9969 2777 (Zoo Main Switchboard). Switchboard will coordinate any emergency First Aid requirement, including Ambulance and Security guidance.

### 5.11 CONFINED SPACES

The Contractor is required to comply with the requirements of Taronga Confined Space Entry Procedures.

A competent person will be authorised by Taronga management as responsible for the safe execution of the work. They must be qualified by training, education, practical experience and technical knowledge of working in confined spaces. They will be responsible for the safe execution of the work in deemed confined spaces at Taronga.

A standby person with the appropriate training must also be in attendance.

All personnel working inside deemed confined spaces at Taronga must attend an induction and receive instructions which include covering emergency procedures, entry/exit procedures and requirements of the above Procedures.

The Contractor is required to obtain a Taronga "Permit of Entry to a Confined Space" before any work commences.

### 5.12 UTILITIES

For work involving utilities such as gas, electricity, communications, potable water, stormwater, treated water and firefighting services, the Contractor must make prior arrangements through the Principal's



Representative for appropriate Taronga personnel to be in attendance to provide advice and information about the systems. This will ensure that work is carried out safely and timely advice is given of any possible disruption to Taronga activities.

### 5.13 SOIL EROSION AND SEDIMENTATION

Contractors will be required to submit an Erosion/Sedimentation Control Plan prior to commencement of works. The control plan will address the risk of sediment and pollutants from the site entering the stormwater drainage system.

### 5.14 HAZARDOUS MATERIAL REMOVAL

All removal of hazardous material from buildings and structures identified for demolition will be in accordance with statutory requirements.

Timings will be identified to remove hazardous material outside of operational hours, where staff and the public will not be impacted.

### 5.15 HERITAGE MANAGEMENT

A section of sandstone wall (representing the previous Zoo boundary) will be retained. The works to the wall will follow the guidelines and recommendations established in the Heritage Assessment prepared by Geoffrey Britton Heritage Consultant.

In addition, the recommendations of the report will be followed during construction. It is expected a Construction Heritage Management Plan may be required as a condition of consent for the works. If required, this will be provided to the Contractor prior to construction to ensure any works adhere to the agreed management measures and guidelines around the protection of heritage items and landscaping heritage items.

If any questions arise from the Contractor during works to heritage items, these should be directed immediately to the Project Manager to seek advice from the Heritage Consultant.

### 5.16 NOISE, VIBRATION AND DUST

#### 5.16.1 Dust

The Contractors Erosion/Sedimentation Control Plan will identify a detailed strategy and plan to minimise dust emission from the site during the demolition, construction and ground works. The Contractor will carry out site remediation work in accordance with the Site Remediation Plan (SRP).

Perimeter hoarding will be erected around the site, with shade cloth/hessian used, to minimise dust emission. In addition, during demolition, continuous water spray or wetting down will be undertaken.

Housekeeping practices will be implemented by the Contractors to ensure work areas are kept clean.

#### 5.16.2 Noise and Vibration

The Construction Noise and Vibration Management Plan details how noise and vibration sources will be identified and managed on this project. Compliance with the Environmental Protection Act (EPA) is required.

Special reference is also made to controls identified in:

- Environmental Protection Regulation;
- Environment Noise – Environment Protection Policy;
- AS2436-1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites;
- Development Consent Conditions; and
- Acoustic Report for SSDA prepared by Acoustic Studio.

### 5.16.3 Sources of Noise and Vibration

The Contractor will identify the sources of noise on the project and determine the acceptable noise levels based on the criteria set out in the management plan with special regard to statutory, project specific requirements, the Acoustic Report prepared by Acoustic Studio and in consultation with Taronga.

### 5.16.4 Noise and Vibration Levels

#### 5.16.4.1 Noise

The Contractor is to identify indicative sound power levels for specific items of plant and equipment used, to estimate noise impacts in accordance with the relevant guidelines. The Contractor is to reference the appropriate noise levels as identified in the Acoustic Report prepared by Acoustic Studio.

#### 5.16.4.2 Vibration

Given the location of the site, some exceedance of daytime vibration limits may be expected in terms of either the potential for building damage or in terms of exceedance of human comfort levels, and operational limits of equipment from any construction activities. The Contractor is to reference the appropriate vibration levels as identified in the Acoustic Report prepared by Acoustic Studio.

### 5.16.5 Procedure for Mitigation of Impacts

Where elimination and prevention are not feasible options, the reduction of the noise at the source and the control of transmission path between the construction site and the receiver are the preferred options for noise minimisation through engineering and or administration controls. Providing treatments at the affected residences or other sensitive land uses would only be implemented as a last resort.

The table below outlines mitigation procedures to reduce or eliminate the impact of construction works. In addition, the Contractor will implement strategies in line with those provided in the Acoustic Report prepared by Acoustic Studio.

Provided the recommendations detailed in this report are correctly implemented, it is anticipated that the Taronga Wildlife Hospital – Nutrition Centre construction works will have no adverse noise impact at the nearest residential receivers.

**Table 10: Mitigation of Impacts**

Control Measures	Responsibility	Timing / Frequency
<b>General and Construction Hours</b>		
Implement this Noise and Vibration Control Plan.	Contractor	Throughout works.
Ensure that construction work is restricted to the stated normal working hours unless otherwise approved: Work outside these hours will only be considered where: It is an emergency; A situation that would create hazardous conditions; Plant breakdowns have delayed an activity that cannot be stopped (e.g., concrete pour); The extended working hours will not impact on surrounding users/buildings.	Contractor	Daily.
Ensure the relevant government authority approval is obtained for any work occurring outside normal working hours.	Contractor	Prior to works outside normal working hours.
Train site personnel in noise and vibration impacts and management, including techniques to minimise noise and vibration emissions to residences.	Contractor	Prior to on-site construction commencing.
<b>Noise</b>		
Inform surrounding neighbours and stakeholders of intended scope of works regarding noise.	Contractor	Prior to on-site construction commencing.

## CONSTRUCTION MANAGEMENT PLAN

Where practical, construct earth mounds or screening in sensitive locations, to act as acoustical barriers and to minimize noise emissions.	Contractor	Prior to on-site construction commencing.
Select and use the quietest available plant and equipment. Minimise the use of 2 stroke engines.	Contractor	Prior to on-site construction commencing.
Monitor individual vehicles, plant and equipment for noise generation.	Contractor	When first brought onto site & every 3 months throughout the project.
Regularly maintain vehicles, plant and equipment and fit engine exhaust systems with properly maintained noise suppression devices such as mufflers, silencers and enclosures in accordance with manufacturer's recommendations.	Contractor	Prior to on-site construction commencing and ongoing.
As far as practicable, locate compounds, parking areas and activities located in positions away from noise sensitive locations.	Contractor	At all times.
Minimize noise-intensive activities as far as possible.	Contractor	At all times.
Where possible, face engines of large plant and equipment away from neighboring properties.	Contractor	At all times.
Notify client and other relevant authorities and surrounding neighbors prior to predicted noisy or vibration-intensive activities	Contractor	Prior to noisy activities commencing.
Notify client, the relevant government authority and adjacent neighbors of any works undertaken outside normal working hours, which could result in noise impacts.	Contractor	Prior to works outside normal working hours.
Record and action all noise complaints.	Contractor	When required.
Monitor general noise levels during working hours.	Contractor	Throughout construction period.
Compare noise levels to the KPI's. If greater than KPI's or background, raise a non-conformance report and implement further noise control strategies.	Contractor	Throughout construction period.
<b>Vibration</b>		
Evaluate likely vibration impacts on nearby structures, sewer mains, and pipelines and develop mitigation measures as appropriate with Taronga Zoo.	Contractor	Prior to on-site construction commencing.
Implement a weekly / daily communication process with stakeholders to inform of construction activities, particularly any excavation in rock, that may cause vibration issue with adjacent buildings. Works to stop immediately if vibration from construction works interfere with neighboring properties.	Contractor	Prior to commencing any construction activities that may cause vibration issues with equipment.
<b>Monitoring</b>		
The Contractor shall monitor noise and vibration objectively of plant and sensitive receptors. The results of these tests shall be recorded on a regular basis.	Contractor	Regularly.
Physical monitoring (using Sound Level Meters or vibration meters) shall be performed in accordance with the relevant Australian Standards or other prescribed standards. Short term attended noise and vibration monitoring shall be performed at locations nominated at the commencement of works.	Contractor	When required.
<b>Recording</b>		
Observations shall be noted in weekly Site Inspection Report.	Contractor	Weekly.

### 5.16.6 General

The Contractor will ensure that any dust caused by the works is reduced to a minimum. Areas worked in by Contractors will be adequately screened to prevent dust spreading to neighbouring buildings via the installation of pre filters.

The Contractors shall notify Taronga in advance of work which may require additional dust protection.

Jack hammers and other noisy equipment including hand-held tools used in the performance of the work will be fitted with effective silencers of a type recommended by the manufacturers.

Compressor sets and motors used in the performance of the work will be fitted with effective acoustic canopies and special engine exhaust silencers of a type recommended by the compressor manufacturer. Where possible the Contractor is to undertake all noisy works between 7.00am to 9.00am Monday to Saturday.

Portable radios and CD players will not be permitted on site. The Contractor shall ensure that all structural borne noise will be kept at a minimum to avoid disruption for the users and occupiers of neighbouring properties for periods outside the agreed noisy works periods. The Contractor will use “best practice” methods of work to obviate any generated noise.

### 5.17 RUBBISH REMOVALS

The Contractor shall remove from site rubbish resulting from the works. Rubbish shall be handled in a manner to confine the material completely and to minimise dust emissions and disposed of in accordance with Contractor’s Environmental Plan.

The Contractors will ensure facilities, grounds and adjacent properties or public areas are not used for the disposal of rubbish from site. The Contractors will engage a waste removal specialist to manage and recycle all waste that leaves the project. To encourage recycling, bins will be located close to areas of work and in a position where access for removal by trucks is possible.

It will be recommended to the Contractor that the large bins are stored near the site compound in the staff car park, to allow for easy collections.

The work is to be undertaken in accordance with the Waste Management Plan detailed in this CMP and will be further detailed by the chosen contractor.

### 5.18 DELIVERIES

Deliveries to the site will be carried out in accordance with the work hours as approved by the development consent approvals and Traffic Management Plan.

The deliveries will be made to the Taronga staff car park from Whiting Beach Road. An area will be allocated here for a site compound and area to store materials. This will be made available to the contractor from appointment to allow for advance ordering of materials.

Only some deliveries will be made directly into the site, and this will be managed carefully to ensure this does not impact operations in the staff areas.

This area of the site is not subject to restricted site access however deliveries will still be scheduled and coordinates relevant sub-contractors and suppliers. Deliveries will aim to be taken in the early morning with consideration of key zoo operation times, e.g., coach arrivals, staff starts and finishes, general traffic movements in the local area.

Agreement on the delivery times will be finalized in consultation with Taronga and in accordance with the Preliminary Traffic Management Plan. All material movements shall be carried out in accordance with Contractor’s material handling procedures and Construction Traffic Management Plan (TMP).

### 5.19 WORKFORCE

It is estimated there will be between 5 – 80 contractors on site at any one time within each stage of the works.



### 5.19.1 FACILITIES

The Contractor compound will be located in the staff car park and will provide office and lunch facilities for the Contractors and subcontractors. The location is shown below by the red outline.

It is also expected that within each stage of the works the contractor will have smaller portacabins located at closer to the site (adjacent to the work zone).

The map below shows the compound location:

**Figure 8: Location of portacabin, entrance and storage**



**Figure 9 – Location of Site Compound in Staff Car Park**



The Contractor entrance to the site will be located at the security entrance as shown above by the green arrow. Security personnel will ensure this entrance is not used by the public.

### 5.19.2 STORAGE

Storage of equipment to be used day to day will be securely kept within an existing Taronga storage building near the portacabins. The storage location is shown above by the blue outline.

Other equipment will be stored within the relevant work area.

**Table 11: Storage requirements**

Phase	Stage	Work Force (Approx.)	Storage Requirements
<b>STAGE 1 – NUTRITION CENTRE</b>			
<b>One</b>	Pre-construction Activities	Less than 5	Materials stored on site in work area.
<b>Two</b>	Demolition Works	Up to 10	Stockpiling of materials on site to reuse bricks elsewhere.
<b>Three</b>	Construction Works	Up to 80	Storage of equipment and materials.
<b>Four</b>	Post Construction Activities	Up to 10	Storage of hoarding and equipment prior to removal from site.

If materials/equipment arrive on site in advance of requiring its use, the Contractor can utilise a storage facility area within the staff car parking (approximately 50sqm).



## 6 WASTE MANAGEMENT PLAN

### 6.1 OBJECTIVES

The objective of the Waste Management Plan is to ensure the maximum amount of waste material resulting from demolition and construction activities are reused and/or recycled to reduce the environmental impact of waste disposal. This can be achieved by:

- Minimise waste generation;
- Ensure appropriate storage, separation and collection of waste;
- Avoid illegal dumping; and
- Promote improved project management and implementation of the WMP.

### 6.2 INITIATIVES

The provisions to achieve the objectives are to be identified by Contractor in a detailed Waste Management Plan (WMP) incorporating waste minimisation strategies prior to commencing construction works. The WMP will be developed in accordance with the Contractor's Environmental Management System to ensure optimum waste management initiatives are implemented.

The Contractor will be encouraged to implement the following initiatives to ensure waste minimisation;

- Special attention in design and the estimating of materials to minimise waste on-site in off-site fabrication of components for the building;
- Separate building waste from other stockpiled materials in an allocated area on site;
- Separate waste streams on site and place into clearly labelled collection bins for each waste stream;
- Minimise site disturbance and limit unnecessary excavation; and
- Implement measures to prevent damage from the elements, odours, health risks and windborne litter.

### 6.3 IMPLEMENTATION

The Contractors are to discuss waste management strategies for the project with material suppliers and waste handling facilities prior to their engagement. The Main Contractor for each stage is to outline waste management plan objectives during site inductions and toolbox talks to ensure all Subcontractors are aware of the legal requirements for disposing of waste.

In carrying out the works, footpaths, public reserves, street gutters are not to be used to store or manage waste materials of any kind with SSDA approval. Material moved offsite is to be transported in accordance with requirements of the EPA and relevant WHS legislation administered by WorkCover NSW.

Subcontractors and suppliers are to be encouraged to:

- Estimate accurate volumes of material to be used in the works;
- Identify potential reuse and recycling opportunities of excess construction material;
- Incorporate the use of prefabricated components and recycled materials when appropriate;
- Arrange for the delivery of materials so that materials are delivered 'as needed' to prevent the degradation of material through weathering and moisture damage;
- Organise with suppliers or manufacturers the return of excess material; and
- Clearly sign post the purpose and waste stream content of the separate collection bins or areas for residual waste.

During the construction phases there will be different waste produced at different times, the below table will identify the waste generated, recycling options and segregation methods.



## CONSTRUCTION MANAGEMENT PLAN

All quantities are estimates only and sources of recycling centres or land fill will be confirmed once the building contractor has been appointed.

Imported materials will use exact quantities to reduce waste generation and if possible, reused in the works or taken away for reuse on other projects.

**Table 12: Waste Disposal**

Phases					
STAGE 1 – NUTRITION CENTRE					
Phase	Activity	Waste Generated	Recycling Method	Estimated Quantity	Disposal Method
Phase 1	Pre-Construction Works	Redundant records and furniture	Separated into recycling and general waste	30m3	General Taronga contractors
Phase 2	Demolition and excavation Works	Demolition	All material to be separated into contaminated or VENM	Nominal 300m3	Reuse VENM on site for levelling ground
			Bricks to be stored for reuse		
	Excavation of tunnel	Excavation	All material to be separated into contaminated or VENM	Nominal 300m3	Reuse VENM on site for levelling ground
Phase 3	Construction	Excess material from construction	Recycle and reuse where possible.	210 tonnes / 15 skips	Contractor to estimate appropriately the material required so excess material does not need to be disposed of.  Recycle and reuse where possible
Phase 4	Post Construction Works	Waste generated as a result of cleaning the site	Recycle where possible	28 tonnes.	General rubbish will be disposed of at licensed landfill.

## 7 ACCESS PLAN

### 7.1 OVERVIEW

The overall traffic impact during the construction period is expected to be nominal within the Taronga site and the adjacent roads expected to accommodate the peak construction traffic generation.

Pedestrian impact during the construction period is also expected to be nominal, with the assigned Contractor minimising the requirement for full pathway closure where safe to do so.

A detailed Construction Traffic Management Plan will be developed by the appointed Contractor prior to the commencement of any construction works.

### 7.2 OCCUPIED PREMISES

The Principal or persons authorised by the Principal will continue in possession and occupancy of all areas of Taronga.

The zoo will always remain fully functional during construction works.

Contractors to Taronga shall be deemed to be authorised by the Principal to access all public areas of the zoo normally open to visitors and at the times the zoo is normally open to visitors except as otherwise provided in the Contract or advised by the Principal's Representative.

### 7.3 VEHICLE ACCESS

#### 7.3.1 CONSTRUCTION ACCESS

The designated truck routes to/ from the arterial road network includes the use of Military Road and Bradleys Head Road. The approach and departure routes on the external road network are shown below.

All construction vehicles accessing the site would do so in full compliance with the required clearway and parking restrictions. No queuing of trucks would be permitted on public roads. Truck arrivals would be coordinated to ensure incoming trucks are not required to wait for a truck space to be available on-site.

**Figure : Vehicle Approach and Departure Routes**



Base map Source: Sydney

Access to the site by construction vehicles will be via Whiting Beach Road from Bradleys Head Road. If required, vehicles will be able to continue down Bradleys Head Road to use the bus turning circle at Taronga

Zoo Wharf before returning up Bradleys Head Road and accessing the site by turning into Whiting on their left.

The usual staff access will be utilised as shown on the map below.

**Figure 10: Access to the Site**



Base Image Source: Nearmap, accessed 07 October 2021

This access has been chosen due to its proximity to the site, to minimise disruption from construction vehicles through the zoo. Disruption will also be mitigated by the requirement of deliveries to be made prior to 9:30am.

### 7.3.2 CONSTRUCTION TRAFFIC

When the construction site is operational, staff and construction traffic will utilise the entrance into the site from the Security Entrance.

Traffic Management will be in place to manage vehicle movements in this location.

**Figure 11: Access road to construction site**





### 7.3.3 TARONGA VEHICLE POLICY

Taronga operates a strict vehicle policy within the site:

1. Restrict movements of vehicles to the minimum requirements for executing the Works. Do not drive private vehicles into the zoo grounds.
2. Do not exceed 10 kilometres per hour.
3. Do not drive vehicles including suppliers' delivery vehicles within the public areas of the zoo between the hours of 9:00am to 5:00pm during school holidays and weekends, and 10:00am to 3:00pm at other times.
4. Between 6:00am and 9:00am and between 5:00pm and 6:00pm during school holidays and between 6:00am and 10:00am and between 3:00pm and 6:00pm at other times, up to 10 vehicle movements are permitted per day in the public areas. Escort larger vehicles to the construction site.
5. Movements of vehicles in other areas of the zoo are restricted to between the hours of 6:00am to 6:00pm subject to the approval of the zoo's management.
6. Roads within the zoo may not have a heavy-duty pavement. The roads may not be suitable for articulated or long wheelbase vehicles. Some of the roads are unsealed and may not be suitable for use in wet weather.
7. Roads within the zoo may have limited width and headroom. Check the access before organising vehicular transport.
8. Use a route as directed by zoo staff and notified prior to start and use service roads where possible.
9. Limit movement of heavy vehicles to be used in removing spoil or other materials from the Taronga Zoo to between the hours of 7.30am to 4.30pm on Monday to Friday and between 7.30am to 1:00pm on

Saturday, or as required by Mosman Council, subject to restrictions in item 3 above for vehicle movements within the zoo.

10. Take responsibility for any damage caused by vehicles, including those of subcontractors and suppliers, using the roads and repair any such damage at no cost to the Principal.
11. Keep access roads and adjacent footpaths, gutters and drains clear of construction waste, debris and mud, clean as required and remove waste, debris and mud from the zoo, all at the Contractor's cost.
12. Comply with the physical limitations on the height of vehicles using zoo roads.
13. Where it is necessary to remove fences within the zoo to enable access to be gained to work areas, keep the areas secure at all times and reinstate the fences as soon as practical.
14. Do not ride in/ on back of vehicles; and ride in seat with seat belt fastened.
15. Fuelling of vehicle at or near public areas is not permitted.
16. Park vehicles on site within the site compound or at locations as directed by zoo staff.
17. The zoo is a pedestrian park and pedestrians have right of way.

As listed above, the construction vehicles accessing the zoo grounds are restricted to occur outside of the busy zoo operating period. Vehicle access within the zoo grounds would generally be limited to 6:00am to 10:00am and 3:00pm to 6:00pm.

### 7.3.4 GOODS AND CONSTRUCTION EQUIPMENT MOVEMENT THROUGH ZOO GROUNDS

The following policy applies to include all goods and construction equipment movement through the zoo grounds:

1. Must be in line with the appropriate "Safe Work Method Statement" and complete a "Risk Assessment" for each task prior to commencement;
2. For larger trucks transporting goods and construction cranes have a person walk the vehicle through the grounds;
3. Take extreme care with cranes in the vicinity of the remaining high robes course;
4. Notify the Principal's Representative before these vehicles enter the zoo ground; and
5. Ensure that these movements occur within an agreed time frame which has been predetermined in consultation with the Principal's Representative and if necessary, also with Taronga Zoo's CW&I Division.

### 7.3.5 CONSTRUCTION VEHICLES

The type and size of the construction vehicles are likely to be as follows:

- Up to 5m long work / utility trucks;
- 6.5m, 9m and 11m long flatbed / work trucks;
- 7.3m long concrete trucks carrying 6m<sup>3</sup> of concrete;
- 8m long mobile concrete trucks carrying 7.4m<sup>3</sup> of concrete;
- 9.5m long concrete pump;
- 11m long 200 tonne crane (may be required); and
- 19m long truck and trailer combination – may be required for final excavation works.

The approximate number of vehicles are as follows:

**Table 13: Construction Vehicles**

Phase	Item/Element	Type of Vehicle	Approximate Number
<b>STAGE 1 – NUTRITION CENTRE</b>			
<b>Phase 1</b>	Pre-construction works	Up to 5m long work / utility trucks.	To be specified in the Traffic Management Plan
<b>Phase 2</b>	Demolition of existing enclosure	19m long truck and trailer combination.	To be specified in the Traffic Management Plan
<b>Phase 3</b>	Construction works	Up to 5m long work / utility trucks; 6.5m, 9m and 11m long flatbed / work trucks; 7.3m long concrete trucks carrying 6m <sup>3</sup> of concrete; 8m long mobile concrete trucks carrying 7.4m <sup>3</sup> of concrete; 9.5m long concrete pump	To be specified in the Traffic Management Plan
<b>Phase 4</b>	Cleaning and finishing works	Up to 5m long work / utility trucks.	To be specified in the Traffic Management Plan
	Commissioning and inspections	Up to 5m long work / utility trucks.	To be specified in the Traffic Management Plan

Concrete trucks have been allowed for all levels based on carrying 6m<sup>3</sup> each and will be able to enter and exit site with all concrete pumped from within site.

No parking is required on the local roads around the entrance on Whiting Beach Road.

All traffic movements will be in strict accordance with the pending Traffic Management Plan.

### 7.3.6 CRANAGE AND TRUCK MOVEMENTS ONSITE

Traffic management measures will be used to control access into and exiting the site.

Depending on construction methods and the ability to get materials onto site a crane may be for these works. Appropriate traffic management will be in place on Whiting Beach Road, and from the access point to the site, to ensure there is no disruption to vehicular or pedestrian movements.

Contractors must note there is a height restriction in certain areas of Taronga due to the Sky Safari Cable Car.

### 7.3.7 ACCESS FOR EMERGENCY VEHICLES

Construction works will not affect the access for emergency vehicles and personnel during the project, however in the event of a construction activity affecting the access path:

- Taronga and the Contractor shall ensure suitable access is always maintained by the Contractors for emergency vehicles and the general public on and off the site; and
- All construction traffic to and from the site will be appropriately managed.

### 7.3.8 PARKING

Contractors and subcontractors personnel will be permitted to park vehicles in the Taronga staff carpark unless otherwise notified by Taronga. Eight spaces will be provided within the staff parking compound. Other parking facilities are available in public space on surrounding streets and Bradley's Head Road.

All Contractors are always to keep Whiting Beach Road clear to allow road users unobstructed access in and out of the area.

The Contractors shall ensure that all persons inducted on the project are advised of the traffic and parking policy for this project for the proposed parking areas on site for construction workers.

## 7.4 PEDESTRIANS

### 7.4.1 ACCESS FOR VISITORS

Access for Taronga staff and visitors to the operational part of the site will be maintained however alterations will be made to suit the staging and sequence of the construction activities. The final access arrangement will be agreed with the Contractor prior to the commencement of the works. This will be demarked with agreed barrier, hoarding and signs.

Taronga shall ensure suitable and safe access is always maintained around the site for staff, visitors and general public. The Contractor will be responsible for the implementation and management of access plans during construction. The Contractor will consult with Taronga and develop access plans that will be incorporated within the Contractor's Site Management Plan.

The plans will include:

- Exact location of temporary signage around the site;
- Exact location of temporary pedestrian crossings and access points;
- Exact location of temporary paths and ramps; and
- Exact location of hoardings and site fencing.



## 7.4.2 ACCESS FOR CONSTRUCTION PERSONNEL

Contractors must make prior arrangements with the appropriate Taronga personnel for themselves, their employees, subcontractors and suppliers to enter zoo grounds.

Subcontractors and suppliers must report to the Taronga Security Officer at the booth in the Goods and Services Entrance at the intersection of Prince Albert Street and Whiting Beach Road.

**Figure 12: Security Access**



Access by the Contractor, subcontractors, suppliers, and workers to the project site once operational will continue to be through the Goods and Services Entrance.

All demolition and construction personnel will be advised of the requirements of access as part of the site inductions prior to commencing work on site.

General circulation from the Contractor's site establishment area and the site will be in accordance with the site establishment plan.

## 8 COMMUNICATION

### 8.1 STAKEHOLDERS

Taronga will coordinate with the Contractors and principal consultants working on the project.

In planning and implementation of the works on site, including access to, from and around the site, Taronga shall consult and coordinate with the Contractors and all relevant stakeholders, authorities and agencies including:

- Taronga staff;
- NSW Fire Brigade;
- NSW Police;
- NSW Department Planning & Environment;
- NSW Department of Primary Industries;
- NSW Rural Fire Service;
- NSW Environment, Energy and Science Group;
- Heritage Council of NSW;
- NSW Aboriginal Land Council;
- Environmental Protection Agency (EPA);
- Mosman Council;
- NSW Roads & Maritime Services (RMS);
- National Broadband Network Ltd;
- Ausgrid;
- Transport for NSW; and
- Sydney Water.

### 8.2 STAKEHOLDER COMMUNICATION

#### 8.2.1 Regular Meeting

Stakeholder communication meetings will be established to keep all key staff informed on key milestones and develop both staff and visitor access/circulation plans, including any applicable social distancing requirements.

#### 8.2.2 Contact List

This contact list will be prepared by the Contractor upon engagement and made available to all parties.

## **9 RECORD KEEPING**

### **9.1 SITE QUALITY ASSURANCE AND DAILY RECORDS**

Contractor's representative will keep adequate records of daily activities and any significant departures or additions in the Project Diary. An Inspection and Test Plan (ITP) shall be completed ensuring compliance with the management plans.

### **9.2 INCIDENT / ACCIDENT MANAGEMENT AND REPORTING**

#### **9.2.1 Incident Management**

The objective of the incident plan is to minimise such disruptions and provide a clear and simple guideline for disruptive events. Contractor's Incident Management Plans are to be implemented on the project upon award of the Contractor.

#### **9.2.2 Accident Management**

The Contractors shall promptly notify Taronga of the occurrence and furnish a written report of the following incidents and accidents:

- Accident involving death or personal injury;
- Accident involving lost time; and
- Incidents with accident potential such as equipment failure, slides, cave ins, and the like.

In the case of accidents either witnessed or reported, involving Taronga staff, public or contractors from which legal proceedings might arise:

- Record the actual type, size and location of signs and devices in use at the time of the accident;
- Notify Taronga as soon as possible; and
- Take photographs of the arrangement for subsequent reporting.

## 10 EMERGENCY PROCEDURE

In the event of any emergency arising during the contract, including:

- Emergency evacuation;
- Fire;
- Flooding and water damage;
- Gas leak;
- Mains power failure;
- Explosion;
- Bomb threat;
- Chemical Spill;
- Construction accident;
- Medical Emergency;
- Theft of Collection items; and
- Criminal or accidental damage.

Taronga will instigate the appropriate procedure for the remainder of the site depending on the emergency present. Trained zoo staff will coordinate all emergencies.

Taronga expects all staff to take Emergency Drills seriously and follow Taronga staff instructions in the event of an emergency.

A constant beeping sound over the Public Address System would indicate an emergency with a Dangerous Animal. Seek refuge in the nearest lockable building on hearing this sound. Report any unannounced emergency to the zoo telephone switchboard (9969 2777).

The Contractor responsible for the demolition and construction work site will be responsible to ensure that all construction personnel associated with the works are evacuated from the work site in accordance with the Contractor's procedures. On evacuation of the work site the Contractor's representative will notify Taronga and advise the status of the site and await any further instructions.

The Contractors should ensure that Taronga Evacuation Plans are displayed within the worksite and the Contractor's site establishment to assist construction personnel evacuating Taronga in the event of an emergency.

Taronga shall ensure emergency procedures are incorporated into the Contractor's plans and incorporated during inductions of workers and include the specific requirements of Taronga in the event of an emergency.

In the event of any emergency the following project team personnel will be contactable during all hours of the day:

Emergency contact table to be completed on award of Contractor:

No.	Position	Name	Telephone Number
1	Site Foreman	TBC	TBC
2	Site Manager	TBC	TBC
3	Contractors, Project Manager	TBC	TBC
4	Taronga, Project Manager	TBC	TBC

The number designates the order of precedence, which may depend on availability at a particular time of day or period of construction.