

Development Consent

Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate for the Minister for Planning under delegation executed on 14 September 2011, the Planning Assessment Commission of NSW (the Commission) approves the Development Application referred to in Schedule A, subject to the conditions specified in Schedules B to D.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the Development.

Member of the Commission

Member of the Commission

Sydney

2016

File:15/13166

SCHEDULE A

Application No:	SSD 7228
Applicant:	Sydney Zoo Pty Ltd
Consent Authority:	Minister for Planning
Land:	Lot 11 in Lot 101 Deposited Plan 1195067
Development:	Construction and operation of a zoological facility within the Western Sydney Parklands.

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DEFINITIONS

Applicant	Sydney Zoo Pty Ltd
BCA	Building Code of Australia
Construction	Construction of a zoological facility including earthworks, buildings, hardstand and parking areas, fencing, signage and landscaping, covered by this consent
Council	Blacktown City Council
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development as described in the EIS and RTS, and as generally depicted in Appendix A
Earthworks	Bulk earthworks, site levelling, import and compaction of fill material, excavation for installation of drainage and services, to prepare the site for construction
EIS	Environmental Impact Statement titled <i>Sydney Zoo SSD 7228 – Environmental Impact Statement</i> , prepared by JBA, dated December 2015
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence issued by the EPA under the POEO Act
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build
Heavy vehicle	Any vehicle with a gross vehicle mass of 5 tonnes or more
Heritage	Encompasses both Aboriginal and historic heritage including sites that predate European settlement, and a shared history since European settlement
Heritage Item	An item as defined under the <i>Heritage Act 1977</i> , and assessed as being of local, State and/ or National heritage significance, and/or an Aboriginal Object or Aboriginal Place as defined under the <i>National Parks and Wildlife Act 1974</i>
Incident	An incident causing or threatening material harm to the environment, and/or an exceedance of the limits or performance criteria in this consent
Management & Mitigation Measures	The Applicant's management and mitigation measures contained in the EIS and included in Appendix B
Material harm to the environment	Harm to the environment is material if it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Minister	Minister for Planning (or delegate)
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
OEH	Office of Environment and Heritage
Operation	Operation of a zoological facility
PCA	Principal Certifying Authority authorised under section 109D of the <i>Environmental Planning and Assessment Act 1979</i>
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Reasonable	Reasonable relates to the application of judgment in arriving at a decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided, community views, and the nature and extent of potential improvements
Registered Aboriginal Parties	As defined in the <i>National Parks and Wildlife Regulation 2009</i>
RMS	Roads and Maritime Services
RTS	Response to Submissions titled <i>Sydney Zoo SSD 7228 - Response to Submissions</i> , prepared by JBA, dated May 2016
Secretary	Secretary of the Department (or nominee)
Sensitive Receivers	Residence, education institution (e.g. school, university, TAFE college),

Site	health care facility (e.g. nursing home, hospital), religious facility (e.g. church) and children's day care facility
Supplementary Information	The land listed in Schedule A, and shown in Appendix A
TfNSW	Supplementary Information submitted by JBA, dated 22 August, 2016
VENM	Transport for NSW Virgin Excavated Natural Material as defined in the POEO Act

SCHEDULE B

ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

- B1. In addition to meeting the specific performance criteria established under this consent, the Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the Development.

TERMS OF CONSENT

- B2. The Applicant shall carry out the Development in accordance with the:
- (a) EIS, RTS and Supplementary Information;
 - (b) development layout plans and drawings in the EIS, RTS and Supplementary Information; and
 - (c) the Management and Mitigation Measures (see Appendix B).
- B3. If there is any inconsistency between the above documents, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.
- B4. The Applicant shall comply with any reasonable requirement(s) of the Secretary arising from the Department's assessment of:
- (a) any reports, plans or correspondence that are submitted in accordance with this consent; and
 - (b) the implementation of any actions or measures contained within these reports, plans or correspondence.

LIMITS OF CONSENT

- B5. This consent lapses five years after the date from which it operates, unless the Development has physically commenced on the land to which the consent applies before the date on which the consent would otherwise lapse under section 95 of the EP&A Act.
- B6. Australian native animals shall comprise less than 1.6 hectares of the overall exhibited animal collection and shall be displayed as part of an Aboriginal Cultural Experience (See Condition C21). This area is to be in accordance with the area designated for Australian animals presented within the Site Plan (see APPENDIX A). Any additional Australian native animals can be displayed as part of educational sessions or 'micro displays' within the commercial facilities across the site (i.e. restaurants, cafes and shops).
- B7. The hours of operation for the Development are restricted, on any day, to:

Month	Hours of Operation
December and January	9am – 10pm
February to November	9am – 6pm

STAGED SUBMISSION OF PLANS OR PROGRAMS

- B8. With the approval of the Secretary, the Applicant may:
- (a) submit any strategy, plan or program required by this consent on a progressive basis; and/or
 - (b) combine any strategy, plan or program required by this consent.
- B9. If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program shall clearly describe the specific stage to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program. A clear relationship between the strategy, plan or program that is to be combined shall be demonstrated.

EVIDENCE OF CONSULTATION

- B10. Where consultation with any public authority is required by the conditions of this consent, the Applicant shall:
- (a) consult with the relevant public authority prior to submitting the required documentation to the Secretary or the PCA for approval, where required;

- (b) submit evidence of this consultation as part of the relevant documentation required by the conditions of this consent; and
- (c) include the details of any outstanding issues raised by the relevant public authority and an explanation of the disagreement between any public authority and the Applicant or any person acting on this consent.

DISPUTE RESOLUTION

- B11. In the event that a dispute arises between the Applicant and either Council or a public authority, in relation to an applicable requirement in this consent or relevant matter relating to the Development, either party may refer the matter to the Secretary for resolution. The Secretary's determination of any such dispute shall be final and binding on the parties.

STATUTORY REQUIREMENTS

- B12. The Applicant shall ensure that all licences, permits and approval/consents are obtained as required by law and maintained as required throughout the life of the Development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits or approval/consents.

Note – This is to include relevant license/approval from Council under section 68 of the Local Government Act 1993 for all domestic effluent disposal and management systems on-site.

STRUCTURAL ADEQUACY AND CERTIFICATION

- B13. The Applicant shall ensure all new buildings and structures are constructed in accordance with the relevant requirements of the BCA.

Note – Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works. Part 8 of the EP&A Regulation sets out the requirements for the certification of the Development.

UTILITIES AND SERVICES

- B14. Prior to the construction of any utility works associated with the Development, the Applicant shall obtain relevant approvals from service providers.
- B15. Prior to operation of the Development, the Applicant shall obtain a Compliance Certificate for water and sewerage infrastructure servicing of the site from Sydney Water Corporation under Section 73 of the Sydney Water Act 1994.

PROTECTION OF PUBLIC INFRASTRUCTURE

- B16. Prior to the commencement of earthworks, the Applicant shall:
- (a) prepare a dilapidation report identifying the condition of all public infrastructure in the vicinity of the site (including roads, gutters and footpaths); and
 - (b) submit a copy of this report to the Secretary and Council.
- B17. The Applicant shall:
- (a) repair, or pay the full costs associated with repairing any public infrastructure that is damaged by the Development; and
 - (b) relocate, or pay the full costs associated with relocating any infrastructure that needs to be relocated as a result of the Development.

COMPLIANCE

- B18. The Applicant shall ensure that employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.
- B19. The Applicant shall be responsible for environmental impacts resulting from the actions of all persons that it invites onto the site, including contractors, sub-contractors and visitors.

OPERATION OF PLANT AND EQUIPMENT

- B20. The Applicant shall ensure that all plant and equipment used for the Development is:
- (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

SCHEDULE C
ENVIRONMENTAL PERFORMANCE AND MANAGEMENT

TRAFFIC AND ACCESS

- C1. No work associated with the Development shall be carried out on land owned by RMS without consent of RMS.

Parking

- C2. The Applicant shall provide sufficient parking facilities on the site during both construction and operation, including for heavy vehicles and for site personnel, to ensure that traffic associated with the Development does not utilise public and residential streets or public parking facilities. Where there is an overflow, the Applicant must implement reasonable and feasible measures to minimise queuing on the surrounding road network. Detail of these measures shall be presented within the Operational Traffic Management Plan (see Condition C5).

Construction Traffic Management Plan

- C3. The Applicant shall prepare a Construction Traffic Management Plan for the Development which will form part of the CEMP in Condition D1 of this consent. The plan shall:
- (a) be prepared by a suitably qualified and experienced person, in consultation with TfNSW, RMS and Council;
 - (b) detail the measures that would be implemented to ensure road safety and network efficiency during earthworks and construction;
 - (c) detail heavy vehicle routes, access and parking arrangements;
 - (d) include a Driver Code of Conduct to:
 - minimise the impacts of construction on the local and regional road network;
 - minimise conflicts with other road users;
 - ensure truck drivers use specified routes;
 - (e) include a program to monitor the effectiveness of these measures; and
 - (f) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.

Operating Conditions

- C4. The Applicant shall ensure:
- (a) internal roads, driveways and parking (including grades, turn paths, sight distance requirements, aisle widths, aisle lengths and parking bay dimensions) associated with the Development are constructed and maintained in accordance with the latest version of AS 2890.1 and AS 2890.2;
 - (b) the swept path of the longest vehicle entering and exiting the site, as well as manoeuvrability through the site, is in accordance with the relevant AUSTROADS guidelines;
 - (c) heavy vehicles and bins associated with the Development are not parked on local roads or footpaths in the vicinity of the site;
 - (d) all loading and unloading of materials is carried out on-site;
 - (e) all trucks entering or leaving the site with loads have their loads covered and do not track dirt onto the public road network; and
 - (f) the proposed turning areas in the car park are kept clear of any obstacles, including parked cars, at all times.

Operational Traffic Management Plan

- C5. The Applicant shall prepare an Operational Traffic Management Plan for the Development which will form part of the OEMP in Condition D4. The plan shall:
- (a) be prepared by a suitably qualified and experienced person, in consultation with TfNSW, RMS and Council;
 - (b) include detail of specific management measures to be implemented during the initial year of operations to address potentially higher than anticipated visitation;
 - (c) include detail of management measures for parking, traffic and transport during high visitation periods (particularly under any operating times considered under the 'peak' scenario in the EIS) including allocated arrival times, off-peak ticketing and the promotion of public transport);
 - (d) include details and analysis of how the largest vehicle can enter and exit the site access, site carpark and loading areas; and

- (e) include detail of management measures to be implemented to minimise impacts offsite, including impacts upon the local road network, public transport services and pedestrian access.

Work Place Travel Plan

- C6. Prior to the commencement of operation of any part of the Development, the Applicant shall prepare and implement a Work Place Travel Plan as part of the Operational Traffic Management Plan detailed in Condition C5, in consultation with TfNSW. The Work Place Travel Plan shall:
- (a) outline facilities and measures to promote public transport usage, such as car share schemes and employee incentives that would achieve a public transport mode share of 25%;
 - (b) describe pedestrian and bicycle linkages and end of trip facilities available on-site; and
 - (c) be implemented for the life of the Development.

SOCIO-ECONOMIC

- C7. Prior to the commencement of construction, the Applicant shall provide a dedicated Community Hotline phone number and email address for the provision of information relating to the Development and to make any complaints. This Community Hotline is to be monitored during construction and operation of the Development. The details of these services are to be provided to the residents of Bungarribee, made available on the main website of the Development and placed on any public communications commissioned by the Applicant in relation to the Development.
- C8. Prior to the commencement of construction the Applicant shall prepare, in consultation with the Secretary, a Community Engagement Plan for the construction and operation of the Development to the satisfaction of the Secretary. The plan shall:
- (a) include a profile of the surrounding community and identify key stakeholders and community members and groups;
 - (b) include detail of procedures and mechanisms used to consult the community and stakeholders on the Development's progress and other issues;
 - (c) include detail of the opportunities for the community of Bungarribee to be involved with the Development during construction and operation (i.e. as part of decision-making, employment or as visitors through an alternate pricing structure);
 - (d) include detail of how the Community Hotline and email address (as required by Condition C7) will be managed and monitored;
 - (e) detail the methods for ongoing engagement with identified key stakeholders and community members and groups (including a commitment to face-to-face meetings at least four times per year); and
 - (f) include adaptive management strategies that may be implemented to address any anticipated or unanticipated social issues that may arise.

Development of Regional Tourism

- C9. Prior to the commencement of operations, the Applicant shall submit a report to the satisfaction of the Secretary demonstrating it has made genuine and reasonable attempts to consult with local recreational facilities and businesses (including Featherdale Wildlife Park) to enhance regional tourism in conjunction with the Development. The report shall include:
- (a) details of how the operation of the Development will differ from the existing recreational facilities and businesses;
 - (b) detail consultation undertaken with local recreational facilities and businesses;
 - (c) outline initiatives implemented to encourage and enhance continued operation in conjunction with local recreational facilities and businesses;
 - (d) detail the success or otherwise of these initiatives using recognised social indicators; and
 - (e) include detail of the additional activities that will be undertaken for the duration of the Development.

The Secretary may request updates on these initiatives at any time.

STORMWATER AND DRAINAGE

Discharge Limits

- C10. The Development shall comply with section 120 of the POEO Act, which prohibits the pollution of waters.

Stormwater Drainage

- C11. The Applicant shall prepare a final Stormwater Drainage Plan for the Development in consultation with Council and in accordance with the *Blacktown Development Control Plan 2015*. The final Stormwater Drainage Plan shall form part of the application for a construction certificate.

Water Quality Monitoring Program

- C12. Prior to the commencement of construction, the Applicant shall prepare, in consultation with EPA, a Water Quality Monitoring Program for the construction and operation of the Development to the satisfaction of the Secretary. The plan shall:
- (a) be generally in accordance with the information provided within the Supplementary Information;
 - (b) detail of additional monitoring information that is to be collected to validate all of the assumptions made within the EIS. Water quality monitoring is to be in accordance with the EPA's guideline '*Approved Methods for the Sampling and Analysis of Water Pollutants in NSW*';
 - (c) include sampling of analytes presented within the Supplementary Information, in addition to oxides of nitrogen (as nitrogen), filterable reactive phosphorus (as phosphorus) and dissolved oxygen (% saturation);
 - (d) include a sampling frequency schedule that is to include sampling at every discharge point at least twice per month until the performance of the system has been validated by the EPA; and
 - (e) include a protocol detailing the remedial action/s that will be undertaken in the event that satisfactory treatment performance in accordance with ANZECC (2000) has not been achieved including when each triggered remedial action would be completed.

BIODIVERSITY

- C13. Prior to undertaking any clearing of 'Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (HN 528)', or activities that have the potential to impact upon the endangered ecological community 'Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion (HN 528)' the Applicant shall purchase and retire **FIVE** ecosystem credits to offset the impacts of the Development upon this endangered ecological community. The ecosystem credits shall be determined in consultation with OEH and in accordance with the assessment presented within the EIS and RTS.

- C14. No development is to occur in areas indicated as 'Existing Vegetation to retain' within Appendix D.

Biodiversity Management Plan

- C15. The Applicant shall prepare and implement a Biodiversity Management Plan for the Development to the satisfaction of the Secretary. The plan shall:
- (a) be prepared by a qualified ecologist in consultation with the OEH, RFS, Council and Western Sydney Parklands Trust;
 - (b) be approved by the Secretary prior to the commencement of any works on the site;
 - (c) include measures to be taken to minimise impacts upon flora and fauna; and
 - (d) include a Cumberland Plain Woodland Plan of Management (see Condition C16).

Cumberland Plain Woodland Plan of Management

- C16. The Applicant shall prepare and implement a Cumberland Plain Woodland Plan of Management for the Development to protect, manage and enhance the Cumberland Plain Woodland on the site and in the immediate surrounds. This plan will form part of the Biodiversity Management Plan in Condition C15 and shall:
- (a) be prepared by a qualified ecologist in consultation with the OEH, RFS, RMS, TfNSW and Western Sydney Parklands Trust;
 - (b) include detail of the plant species, management zones, vegetation monitoring, weed control measures, planting methodology and regeneration monitoring;
 - (c) include detail of all Cumberland Plain Woodland areas on the site of the Development and detail how these areas shall be suitably fenced and environmental qualities recognised (e.g. signage); and
 - (d) shall be implemented as part of the landscaping works and shall be maintained by or on behalf of the Applicant in perpetuity of the Development.

Fencing

- C17. All areas of Cumberland Plain Woodland identified for retention in the EIS shall be protected by suitable, fencing and signage during construction and operation. The fencing is to be constructed prior to the commencement of works.

ANIMAL WELFARE AND BEST PRACTICE

- C18. The Applicant shall implement best practices and comply with all relevant guidelines, including but not limited to the *National Zoo Biosecurity Manual, 2011*, to ensure exceptional standards for animal welfare are met and maintained throughout the life of the Development.
- C19. The Development shall comply with the NSW *Exhibited Animals Protection Act 1986*, the NSW *Exhibited Animals Protection Regulation 2010* and the NSW *Biosecurity Act 2015*.
- C20. The Applicant shall obtain all relevant approvals and design all exhibits in consultation with the Department of Primary Industries – Animal Welfare Unit.

ABORIGINAL HERITAGE

Aboriginal Cultural Experience

- C21. The Applicant is to collaborate with Muru Mittigar and Registered Aboriginal Parties consulted within the EIS to the satisfaction of the Secretary to establish a detailed Aboriginal Heritage Experience Strategy in conjunction with the display of Australian native animals, to the satisfaction of the Secretary. This strategy will form part of the OEMP in Condition D4 and shall:
- (a) be prepared by a suitably qualified and experienced heritage consultant;
 - (b) include detail of infrastructure, signage and various other materials to ensure the Australian native animal exhibits of the Development are fully integrated with the presentation of Aboriginal heritage;
 - (c) outline how the experience will increase awareness and education in relation to Aboriginal heritage;
 - (d) demonstrate how direct contact with Australian native animals will enhance the education of Aboriginal culture; and
 - (e) demonstrate how Aboriginal people will have an ongoing participatory role in the experience.

Aboriginal Cultural Heritage Management Plan (ACHMP)

- C22. Prior to the commencement of construction, the Applicant shall prepare an ACHMP for PAD1 and PAD 2 (as identified within the EIS) outlining how these sites will be managed to the satisfaction of the Secretary. The plan shall:
- (a) be prepared by a suitably qualified and experienced expert in consultation with the Registered Aboriginal Parties;
 - (b) describe the procedures for reburial or management of artefacts retrieved during site investigations, if required;
 - (c) describe the measures to manage and/or protect any relics identified during construction and operation of the Development;
 - (d) ensure the legal protections under Section 86 of the *National Parks and Wildlife Act 1974* are incorporated into any other relevant management plan of this consent, including the landscape plans; and
 - (e) describe the interpretive materials to be installed at the site.

Unexpected Finds Protocol

- C23. If Aboriginal objects not identified within the EIS are uncovered during earthworks, excavation or disturbance, work in the immediate area must stop immediately and the Regional Operations Group of the OEH and the Registered Aboriginal Parties are to be consulted.

HERITAGE

Heritage Interpretation Plan

- C24. The Applicant shall prepare a Heritage Interpretation Plan to acknowledge the non-indigenous heritage of the site. The plan will form part of the OEMP in Condition D4 and shall:
- (a) be prepared by a suitably qualified and experienced expert in consultation with the OEH NSW Heritage Division and Council;
 - (b) include provision for naming elements within the Development that acknowledges the site's heritage, such as the name of the roadways within the estate; and
 - (c) incorporate interpretive information on any identified sites.

Unexpected Finds Protocol

- C25. If any previously unidentified archaeological relics previously unidentified within the EIS are uncovered during the course of the construction of the Development, then all works shall stop immediately in that area and the OEH NSW Heritage Division contacted. Depending on the possible significance of the relics, an archaeological assessment may be required before further work can continue in that area.

SOILS, EROSION AND SEDIMENTATION

Imported Soil

- C26. The Applicant shall ensure that any material imported and used as fill on the site:
- (a) is VENM as defined in Schedule A; or
 - (b) meets the requirements of the EPA's *Excavated Natural Material Order 2014*, under the *Protection of the Environment Operations (Waste) Regulation 2014*.
- C27. The Applicant shall:
- (a) keep accurate records of the volume and type of fill to be used; and
 - (b) make these records available to the Secretary upon request.

Erosion and Sediment Control

- C28. Prior to the commencement of earthworks, the Applicant shall install and maintain suitable erosion and sediment control measures on-site, in accordance with the relevant requirements in the latest version of the *Managing Urban Stormwater: Soils and Construction Guideline*.

NOISE

Hours of Work

- C29. The Applicant shall comply with the hours of work detailed in Table 1, unless otherwise agreed in writing by Council and the Secretary.

Table 1: Hours of Work

Activity	Day	Time
Earthworks and construction	Monday – Friday	7:00am to 6:00pm
	Saturday	8:00am to 1:00pm
Operation	Monday – Sunday	See Condition B7

- C30. Works outside of the hours identified in Condition C29 may be undertaken in the following circumstances:
- (a) works agreed to in writing by the Secretary;
 - (b) for the delivery of materials and/or animals required outside these hours by the NSW Police Force or other authorities for safety reasons; or
 - (c) where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

Construction Noise

- C31. The Development shall be constructed with the aim of achieving the construction noise management levels detailed in the *Interim Construction Noise Guideline* (Department of Environment and Climate Change, 2009). All feasible and reasonable noise mitigation measures shall be implemented and any activities that could exceed the construction noise management levels shall be identified and managed in accordance with the management and mitigation measures in the EIS.

Operational Noise Limits

- C32. The Applicant shall ensure that noise generated by the operation of the Development does not exceed the noise limits in Table 2.

Table 2: Project Specific Noise Limits (dB(A))

Receiver Location		Day L _{Aeq} (15 minute)	Evening L _{Aeq} (15 minute)	Night L _{Aeq} (15 minute)
Bungarribee, Eastern Creek		51	50	40
R1 (Great Western Highway)		57	50	40
S1 (Eastern Creek Primary School)		45	N/A	N/A

Note: Refer to **Appendix C** for the location of sensitive receivers.

AIR QUALITY

Dust Minimisation

- C33. The Applicant shall implement all reasonable and feasible measures to minimise dust and odour emissions generated during demolition, earthworks, construction and operation of the Development.
- C34. During construction and operation, the Applicant shall ensure:
- exposed surfaces are suppressed by regular watering;
 - any vehicles (including patron vehicles) associated with the Development do not track dirt onto the public road network;
 - public roads are to be kept clean at all times; and
 - any exposed surfaces are to be stabilised as soon as practicable to minimise any dust generation.

HAZARDS AND RISK

Dangerous Goods

- C35. The quantities of dangerous goods stored and handled at the site shall be below the threshold quantities listed in the Department's *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* at all times.

Bunding

- C36. The Applicant shall store all chemicals, fuels and oils used on-site in appropriately banded areas in accordance with the requirements of all relevant Australian Standards, and/or the EPA's *Storing and Handling of Liquids: Environmental Protection – Participants Handbook*.

REGULATED MATERIALS

- C37. The Applicant is to consult with the EPA regarding any regulated materials including radiation materials and obtain appropriate permits in accordance with the *Radiation Control Act 1990*.

WASTE

- C38. The Applicant shall revise and update the Waste Management Plan provided as part of the EIS to include the following additional requirements:
- detail of onsite composting;
 - a map of locations where composted materials are to be used;
 - detail of measures to be implemented to minimise leachate generation and prevention of pollution of any waters, both offsite and onsite (ponds, dams, storage); and
 - detail of how composting practices are being monitored.

Statutory Requirements

- C39. The Applicant shall assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the EPA's *Waste Classification Guidelines Part 1: Classifying Waste, November 2014*, or its latest version and dispose of all wastes to a facility that may lawfully accept the waste.
- C40. The Applicant shall retain all sampling and waste classification data for the life of the Development in accordance with the requirements of the EPA.

- C41. Waste generated outside the site shall not be received at the site for storage, treatment, processing, reprocessing, or disposal.
- C42. The collection of waste generated during the operation of the Development not occur after 6:00pm on any day.

Waste Storage Areas

- C43. Prior to the commencement of operation of the Development, the Applicant shall obtain agreement from DPI (Animal Welfare Unit) for the design of the waste storage area for each exhibit area.
- C44. Waste shall be secured and maintained within designated waste storage areas at all times.

STAKEHOLDER ENGAGEMENT

VISUAL AMENITY

Landscaping

- C45. The Applicant shall maintain the landscaping and vegetation on the site for the life of the Development.

Signage

- C46. A Signage Strategy shall be submitted for the approval of the Secretary, prior to the installation of any signs visible from the public domain. The Strategy shall be prepared in consultation with the RMS, Council and the Western Sydney Parklands Trust.

Note: *This condition does not apply to temporary construction and safety related signage*

Lighting

- C47. The Applicant shall ensure the lighting associated with the Development:
- (a) complies with the latest version of *AS 4282 (INT) - Control of Obtrusive Effects of Outdoor Lighting*; and
 - (b) is mounted, screened and directed in such a manner that it does not create a nuisance to surrounding properties or the public road network.

SCHEDULE D

ENVIRONMENTAL MANAGEMENT AND REPORTING

ENVIRONMENTAL MANAGEMENT

Construction Environmental Management Plan

- D1. The Applicant shall prepare and implement a Construction Environmental Management Plan (CEMP) to the satisfaction of the Secretary. The CEMP shall:
- (a) be prepared by a suitably qualified and experienced person in consultation with Council;
 - (b) be approved by the Secretary prior to the commencement of construction;
 - (c) outline all environmental management practices and procedures to be followed during earthworks and construction;
 - (d) describe all activities to be undertaken on the site during earthworks and construction, including a clear indication of construction stages;
 - (e) describe the specific measures to be implemented to protect the significant environmental assets on-site during earthworks and construction;
 - (f) detail how the environmental performance of the construction works will be monitored, and what actions will be taken to address identified adverse environmental impacts;
 - (g) describe of the roles and responsibilities of all relevant employees involved in earthworks and construction;
 - (h) provide contact details of the site manager and principal contractors; and
 - (i) include all sub-management plans required under Condition D2 of this consent.
- D2. As part of the CEMP required under Condition D1 of this consent, the Applicant shall include the following:
- (a) Construction Traffic Management Plan (see Condition C3);
 - (b) Community Engagement Plan (see Condition C8); and
 - (c) Construction Air Quality Management Plan.
- D3. The approved Construction Environmental Management Plan (as revised and approved by the Secretary) shall be implemented by the Applicant for the duration of earthworks and construction.

Operational Environmental Management Plan

- D4. The Applicant shall prepare and implement an Operational Environmental Management Plan (OEMP) to the satisfaction of the Secretary. The OEMP shall:
- (a) be prepared by a suitably qualified and experienced person in consultation with Council;
 - (b) be approved by the Secretary prior to the commencement of the operation;
 - (c) describe all activities to be undertaken as part of the operation of the Development;
 - (d) list statutory and other obligations that the Applicant is required to fulfil during the operation of the Development;
 - (e) present overall environmental policies, guidelines and principles to be applied to the operation of the Development;
 - (f) provide details of how environmental performance would be managed and monitored to meet acceptable outcomes, including what actions will be undertaken to address identified potential adverse environmental impacts;
 - (g) include all sub-management plans required under Condition D5 of this consent.
- D5. As part of the OEMP required under Condition D4 of this consent, the Applicant shall include the following:
- (a) Operational Traffic Management Plan (see Condition C5);
 - (b) Community Engagement Plan (see Condition C8);
 - (c) Aboriginal Cultural Experience (see Condition C21);
 - (d) Heritage Interpretation Plan (see Condition C24); and
 - (e) Operational Air Quality Management Plan.
- D6. The approved Operational Environmental Management Plan (as revised and approved by the Secretary) shall be implemented by the Applicant for duration of operation of the Development.

ANNUAL REVIEW

- D7. Each year, unless otherwise agreed by the Secretary, the Applicant shall review the environmental performance of the Development to the satisfaction of the Secretary. This review shall:

- (a) include a comprehensive review of the monitoring results and complaints records received by the Development over the previous calendar year, which includes a comparison of these results against the:
 - i) relevant statutory requirements, limits or performance measures/criteria;
 - ii) requirements of any plan or program required under this consent;
 - iii) monitoring results of the previous years; and
 - iv) relevant predictions in the EIS;
- (b) identify any non-compliance over the last year and describe the actions that were (or are being) taken to ensure compliance;
- (c) identify any trends in monitoring data over the life of the Development;
- (d) identify any discrepancies between the predicted and actual impacts of the Development and analyse the potential cause of any significant discrepancies; and
- (e) describe what measures will be implemented over the next year to improve the environmental performance of the Development.

REPORTING

Incident Reporting

- D8. The Applicant shall notify the Secretary and any other relevant agencies of any incident or potential incident with actual or potential significant off-site impacts on people or the biophysical environment associated with the facility immediately after the Applicant becomes aware of the incident.
- D9. Within seven days of the date of this incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident.

Regular Reporting

- D10. The Applicant shall provide regular reporting on the environmental performance of the Development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

AUDITING

- D11. Within two years of the date of this consent, and every three years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the Development. The audit shall:
 - (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the Development and assess whether it is complying with the requirements of this consent and any other relevant approvals (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of any approved strategy, plan or program required under the abovementioned consents; and
 - (e) recommend measures of actions to improve the environmental performance of the Development, and/pr strategy, plan or program required under these consents.

Note: This audit team shall be led by a suitably qualified auditor and include relevant experts in any other fields specified by the Secretary.

- D12. Within three months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained within the audit report.

ACCESS TO INFORMATION

- D13. The Applicant shall make the following information publicly available on its website and keep the information up to date:
 - (a) make copies of the following publicly available on its website:
 - i) the documents referred to in Condition B2;
 - ii) all current statutory approvals for the development;
 - iii) all approved strategies, plans and programs required under the conditions of this consent;

- iv) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - v) a complaints register consistent with that provided in Appendix XXX of the EIS, updated on a monthly basis;
 - vi) the annual reviews of the development;
 - vii) any independent environmental audit of the development, and the Applicant's response to the recommendations in any audit;
 - viii) any other matter required by the Secretary; and
- (b) keep this information up to date, to the satisfaction of the Secretary.

Note: *This condition does not require any confidential information to be made available to the public.*

APPENDIX A
SITE PLAN (Area 4 – Australian Walkabout)



APPENDIX B
APPLICANT'S MANAGEMENT AND MITIGATION MEASURES

Table 24 – Summary of site specific environmental safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing
General			
General	Environmental awareness training must be provided, by the contractor, to all field personnel and subcontractors.	Contractor	Pre-construction and during construction as required.
Air and Odour			
Air quality emissions – general management	<ul style="list-style-type: none"> Reduce drop heights during loading and unloading of fill material Minimise area of exposed surfaces Minimise amount of stockpiled materials Where possible, apply barriers, covering or temporary rehabilitation Rehabilitate completed sections as soon as practicable Restrict construction activities during unfavourable weather conditions Water carts and sprays to be used to suppress instances of dust transportation	Construction contractor	Construction
Air quality emissions through vehicle movements	<ul style="list-style-type: none"> All construction plant, equipment and vehicles to be properly maintained and operated so as to alleviate excessive exhaust emissions Engines of construction plant to be switched off when not in use Limit vehicle speeds on-site to 40km/h	Construction contractor	Construction
Air quality emissions through loading and transport of materials	Waste and material loads leaving the subject site are to be covered at all times	Construction contractor	Construction
Air quality emissions	Any material deposited on the road network due to truck movements to and from the site would be either prevented or cleaned up immediately.	Construction contractor	Construction
Odour management across the site	<ul style="list-style-type: none"> Procedures for staff to report the presence of odours, particularly in unexpected places; If composting windrows require turning, this should be done during periods of good atmospheric dispersion Maintaining an odour complaints register which captures all complaints from patrons and off-site receptors	Sydney Zoo	Operation
Noise			
The potential for exceedance of the NMLs across the proposal footprint	<p>Prepare a construction noise and vibration management plan (CNVMP). It would be a sub-plan of the CEMP. As a minimum, the plan would:</p> <ul style="list-style-type: none"> Map the sensitive receiver locations including residential properties Include safeguards and management measures to manage out of hours working Include an assessment to determine potential risk for activities likely to affect receivers, including for activities undertaken during and outside of standard working hours Include a process for assessing the performance of the implemented safeguards and management measures Specify the equipment restrictions that would be implemented at night if night works required Describe the respite periods that would be implemented Specify restrictions on allowing equipment, plant and traffic to idle on site Specify the avoidance of activities that would generate impulsive noise Ensure any potentially impacted receivers are informed ahead of any planned works taking place outside of the recommended standard hours for construction works Ensure noise at sensitive receivers is monitored Identify how the construction staging and program includes for monitoring at sensitive receivers Include a specific process for documenting and resolving issues and complaints. 	Construction contractor	Pre-construction

Impact	Environmental safeguards	Responsibility	Timing
	<i>Note: The CNVMP would be routinely updated in response to any changes in noise and vibration. Tool box talks would be used to communicate constructor obligations and responsibilities under the plan.</i>		
The potential for exceedance of the NMLs across the proposal footprint	Locate fixed plant as far from residences as possible and behind site structures	Construction contractors	Construction
Construction noise impacts	Working hours are to be restricted in accordance with the EPA Interim Construction Noise Guideline. Working hours are to be in accordance with: <ul style="list-style-type: none"> Between 7.00am and 6.00pm, Monday to Friday. Between 8.00am and 1.00pm Saturdays. No work or deliveries on Sunday and/or public holidays. If work is required to be undertaken outside normal work hours, the Contractor will need approval from the Principal. The Contractor is to provide enough information for the Principal to evaluate any potential noise impact from the proposed works.	Construction contractor	Construction
Construction noise impacts	Community and business notification would be done prior to works commencing outlining the nature of the works, work hours and contact number. Additional community and business notification would be done at least five days before works outside standard hours that has a potential to cause any noise impact.	Construction contractor / Sydney Zoo	Pre-construction/ construction
Construction noise impacts	Any required night time work predicted to exceed the noise management level should aim to not affect residences for more than two consecutive nights or where possible, more than six nights over a one-month period.	Construction contractor / Sydney Zoo	Construction
Traffic, parking and access			
Construction traffic impacts	A construction traffic management plan (CTMP) would be prepared as a sub-plan of the CEMP. As a minimum, the plan would include the following controls: <ul style="list-style-type: none"> minimise use of heavy vehicles on local roads restrict deliveries to outside of peak traffic periods where possible ensure emergency vehicle access is maintained, including consultation with emergency services identify haulage routes and minimise impacts on local routes provide warning and advisory signage providing safe access points to work areas from the adjacent road network safety barriers where necessary maintaining adequate sight distance displaying prominent warning signage covering truck loads avoiding vehicle idling deliveries planned to minimise the number of trucks arriving at site at one time. materials delivered and spoil removed from the site during standard construction hours. use of Traffic Controllers to ensure safe vehicle and pedestrian movements for example when trucks enter or leave the site a Driver Code of Conduct plan Provide for local community consultation and notification of local road network and traffic impacts 	Construction contractor	Pre-construction/ Construction
Operational traffic impacts	An operational transport management plan (OTMP) would be prepared which would investigate the potential of the following: <ul style="list-style-type: none"> online booking systems, with allocated visiting periods and staggered timing 	Sydney Zoo	Operation

Impact	Environmental safeguards	Responsibility	Timing
	<ul style="list-style-type: none"> ▪ implementation of peak period availability of additional accessible parking spaces ▪ off-peak ticketing price reductions ▪ promotion of access via the M7 Motorway ▪ promotion of arrivals via public transport ▪ promotion of car pooling ▪ combined tour packages with other tourist destinations ▪ potential for additional regular route bus services and direct shuttle bus services between Blacktown Railway Station and the site (subject to further consultation with TfNSW) ▪ promotion of school tours during off-peak periods ▪ preparation of a Work Place Travel Plan to minimise staff travel by private car ▪ preparation of a Transport Access Guide for visitors ▪ extended opening hours, particularly during peak periods to flatten out the peak 		
Initial opening traffic impacts	An initial opening period transport management plan will be prepared with considering for the peak opening period and specific opening events which would be expected to have different traffic generating impacts compared to normal operation.	Sydney Zoo	Operation
Water, drainage and stormwater			
Sediment-laden run off and associated water quality impacts management	<p>Prepare a Soil and Water Management Plan as part of the CEMP and address the following:</p> <ul style="list-style-type: none"> ▪ The NSW Soils and Construction – Managing Urban Stormwater Volume 1 ‘the Blue Book’ (Landcom, 2004) and Volume 2 (DECC, 2008) <p>Detail the following as a minimum:</p> <ul style="list-style-type: none"> ▪ Identification of catchment and sub-catchment areas, high risk areas and sensitive areas ▪ Sizing of each of the above areas and catchment ▪ The likely volume of run-off from each road sub-catchment ▪ Direction of flow of on-site and off-site water ▪ Separation of on-site and off-site water ▪ The direction of run-off and drainage points during each stage of construction ▪ Dewatering plan which includes process for monitoring, flocculating and dewatering water from site (i.e. formation or excavations) ▪ A mapped plan identifying the above ▪ Include progressive site specific Erosion and Sedimentation Control Plans (ESCPs). The ESCP is to be updated at least fortnightly ▪ A process to routinely monitor the Bureau of Meteorology weather forecast ▪ Preparation of a wet weather (rain event) plan which includes a process for monitoring potential wet weather and identification of controls to be implemented in the event of wet weather. These controls are to be shown on the ESCPs ▪ Provision of an inspection and maintenance schedule for ongoing maintenance of temporary and permanent erosion and sedimentation controls. 	Construction contractor	Pre-construction/ construction
On-site sediment and waste laden run off and associated water quality impacts during construction	<ul style="list-style-type: none"> ▪ Erosion and sediment control measures would be implemented to ensure no sediment leaves the site. ▪ All waste materials (such as demolition materials) would be contained to prevent possible run off prior to removal from the site. 	Construction contractor	Construction
Outlet structures discharging to Eastern Creek within waterfront land	<ul style="list-style-type: none"> ▪ The design and construction of any outlet structures on waterfront land is to be in accordance with the Guidelines for outlet structures on waterfront land (DPI 2012) 	Designer	Detailed design
Accidental spillage and associated water quality impacts	Maintain emergency spill kits on-site at all times and make all staff aware of the location of the spill kits and trained in their use.	Construction contractor	Construction

Impact	Environmental safeguards	Responsibility	Timing
Fuel storage and refuelling	<ul style="list-style-type: none"> All fuels, chemicals, and liquids would be in an impervious bunded area within the compound site. The refuelling of plant and maintenance of machinery would be undertaken in impervious bunded areas within the compound site. 	Construction contractor	Construction
Machinery maintenance checks	Machinery would be checked daily to ensure there is no oil, fuel or other liquids leaking from the machinery.	Construction contractor	Construction
Erosion risk	<ul style="list-style-type: none"> Disturbed surfaces would be reinstated as soon as possible. Erosion and sedimentation control measures would not be removed until disturbed areas have stabilised. Any damage from construction to the ground surface shall be restored to pre-construction condition on completion of works. 	Construction contractor	Construction
Aboriginal heritage			
Potential heritage and archaeological impacts - general	<p>Develop an Aboriginal Cultural Heritage Assessment Report (ACHAR). It would be within the CEMP. As a minimum, the plan would:</p> <ul style="list-style-type: none"> map locations of known and potential sites of heritage and archaeological value do identify high-risk and no-go zones identify potential environmental risks and impacts due to the proposed work identify appropriate safeguards and management measures to minimise potential risk identify appropriate safeguards and management measures to avoid the risk of harm implement appropriate safeguards and management measures to protect heritage items and potential archaeological assets 	Construction contractor	Pre-construction
Heritage induction training to cover all works across the site	<ul style="list-style-type: none"> Provide Aboriginal heritage awareness training to the construction workforce prior to starting on site which would include: <ul style="list-style-type: none"> guidelines to follow if unanticipated heritage items or deposits are located during works the procedure for managing any unexpected find, discovering human remains, or unearthing other archaeological remains. Provide the Aboriginal heritage awareness training to any person or visitor to the site during construction 	Construction contractor	Construction
Unexpected finds discovery across the site	<ul style="list-style-type: none"> If unexpected finds are discovered during the proposed works, immediately cease all works within 10 metres of discovering an unexpected find (e.g. archaeological remains, heritage item, and potential relic). Engage a heritage consultant to assess the find and the NSW Heritage Division would be notified of the discovery of a relic in accordance with Section 146 of the NSW <i>Heritage Act 1977</i> 	Construction contractor	Construction
Human remains discovery across the site	Handle human remains under the same process as an unexpected finds discovery; however, prior to the archaeologist recording the find contact the NSW Police, the OEH environment line and the OEH anthropologist.	Construction contractor	Construction
Non-Aboriginal heritage			
Potential heritage and archaeological impacts - general	<p>Develop a non-Aboriginal heritage management plan (NAHMP). It would be a sub-plan of the CEMP. As a minimum, the plan would:</p> <ul style="list-style-type: none"> map locations of known and potential sites of heritage and archaeological value do identify high-risk and no-go zones identify potential environmental risks and impacts due to the proposed work identify appropriate safeguards and management measures to minimise potential risk identify appropriate safeguards and management measures to avoid the risk of harm implement appropriate safeguards and management measures to protect heritage items and potential archaeological assets 	Construction contractor	Pre-construction
Heritage induction training to cover all	<ul style="list-style-type: none"> Provide non-Aboriginal heritage awareness training to the construction workforce prior to starting on site which would 	Construction contractor	Construction

Impact	Environmental safeguards	Responsibility	Timing
works across the site	include: <ul style="list-style-type: none"> – the location of heritage items outside the study area, including the extant gate entrance for the former OTC transmission station – guidelines to follow if unanticipated heritage items or deposits are located during works – the procedure for managing any unexpected find, discovering human remains, or unearthing other archaeological remains. ▪ Provide the non-Aboriginal heritage awareness training to any person or visitor to the site during construction 		
Unexpected finds discovery across the site	<ul style="list-style-type: none"> ▪ If unexpected archaeological finds are discovered during the proposed works, immediately cease all works within 10 metres of discovering an unexpected find (e.g. archaeological remains, heritage item, and potential relic). ▪ Engage a heritage consultant to assess the find and the NSW Heritage Division would be notified of the discovery of a relic in accordance with Section 146 of the NSW <i>Heritage Act 1977</i> 	Construction contractor	Construction
Human remains discovery across the site	Handle human remains under the same process as an unexpected finds discovery; however, prior to the archaeologist recording the find contact the NSW Police, the OEH environment line and the OEH anthropologist.	Construction contractor	Construction
Waste management			
Waste generation during construction	Classify, handle and store all removed waste in the construction compounds/laydown areas in accordance with the NSW Waste Classification Guidelines 2009: Part 1 Classifying Waste (DECCW) and Storing and Handling liquids, Environmental Protection (DECC, 2007).	Construction contractor	Construction / Operation
Waste and resource management during construction across the proposal	Prepare a waste and resource management plan (WRMP) as a sub-plan of the CEMP. As a minimum describe the measures for handling, storing and classifying waste when 'onsite' and its subsequent disposal offsite to the relevant licenced facility.	Construction contractor	Construction / Operation
Waste disposal during construction across the proposal	Send all disposed materials to a suitably licenced waste management/landfill facility.	Construction contractor	Construction / Operation
Waste handling and storage during construction across the proposal	Store and segregate all waste at source (e.g. the construction compounds/laydown areas) in accordance with its classification. This includes recycled and reusable materials.	Construction contractor	Construction / Operation
Littering and site tidiness during construction across the proposal footprint	Monitor for waste accumulation, littering and general tidiness during routine site inspections.	Construction contractor	Construction / Operation
Resource recovery during construction across the proposal	Apply resource recovery principles: <ul style="list-style-type: none"> ▪ Reuse proposal-generated waste materials onsite (e.g. topsoil, recycled aggregate) providing it meets with exemption and classification requirements ▪ Failing that, transfer the materials for use elsewhere on another site under a resource recovery exemption ▪ Employ waste segregation to allow paper, plastic, glass, metal and other material recycling. These materials could be either reused onsite or transferred to a recycling facility ▪ Consider composting general putrescible waste to allow recovery. Transfer these materials offsite to a composting facility. 	Construction contractor	Construction / Operation
Reducing primary resource demand during construction across the proposal	Use recycled and low embodied energy products to reduce primary resource demand in instances where the materials are cost and performance competitive (e.g. where quality control specifications allow).	Construction contractor	Construction / Operation
Landscape character and visual impact			
Management of the construction works to minimise their visual impacts on nearby streetscape character	<ul style="list-style-type: none"> ▪ Implement a maintenance schedule to ensure the entry to the Parklands from the Great Western Highway remains clear and tidy ▪ Consider screening methods to reduce the visual impact of the work site 	Construction contractor	Construction
Light spill impacts during construction	<ul style="list-style-type: none"> ▪ Screen, shield and cut-off all temporary site lighting to prevent light spill where possible 	Construction contractor	Construction

Impact	Environmental safeguards	Responsibility	Timing
across the proposal footprint	<ul style="list-style-type: none"> Use directional light sources where possible to reduce lateral light spill Use low luminescence lighting lights where feasible to reduce the lateral light spill Shield the top of all site lighting to prevent any upward light glare Remove any lighting conflict with the general street lighting to prevent the risk of motorists becoming disorientated or distracted 		
Operational light spill impacts on adjacent properties	<ul style="list-style-type: none"> Follow the lighting design specification that aims to ensure any the height and direction of any lighting pole would not introduce sky glow or impacts on neighbouring residential properties or road users of the Great Western Highway Use directional lighting fixtures with cut-offs and filters as required 	Construction contractor/ Sydney Zoo	Detailed design/ Pre-construction
Vegetation and biodiversity			
Biodiversity management across the entire proposal footprint	<p>Prepare a biodiversity management plan (BMP) as a sub-plan of the CEMP. As a minimum, the plan would:</p> <ul style="list-style-type: none"> Provide for the discovery of unexpected threatened flora or fauna. Provide for contractor staff training to be aware of the sensitivity of the surrounding environment including threatened ecological communities Identify impact areas and measures for clearly delineating these areas, using fences or similar means to prevent encroachment of the works into the surrounding bushland. 	Construction contractor	Pre-construction
Biodiversity management across the entire proposal footprint	<ul style="list-style-type: none"> Vegetation / woody debris for removal should be used in adjacent areas for habitat features or mulched for soil erosion control. Work in riparian zones (i.e. areas of River Flat Eucalypt Forest) would be undertaken to limit impacts on aquatic flora and fauna, and their habitats. This would include measures to preventing run-off into the adjacent vegetation and creek and clearly delineating the construction area boundaries. 	Construction contractor	Construction
Noxious weed management	<ul style="list-style-type: none"> Areas proposed for disturbance where noxious weeds are present should be managed according to the weed class. Soil containing seeds from exotic grass species should be removed from the site as soon as practicable and / or stored appropriately to prevent their spread. Wash down machinery before entering the site to limit weed spread. 	Construction contractor	Construction
Biodiversity impacts on watercourses and drainage lines	<ul style="list-style-type: none"> Construction adjacent to drainage lines should be completed during dry periods. Storage areas should be located away from the drainage lines to minimise risk of pollution and adverse impact to aquatic ecosystems. Installation of sediment and runoff control measures to prevent runoff entering adjacent bushland areas and watercourses. Potential chemical pollutants (e.g. fuels, oils, lubricants, paints etc.) would be stored in appropriate containers within bunded areas within construction compounds to minimise the risk of the pollution of aquatic environments. 	Construction contractor	Construction
Loss of hollow bearing trees	<ul style="list-style-type: none"> As a precautionary measure ensure a qualified ecologist would be present during the felling/pruning of any identified hollow-bearing trees to manage wildlife that may be disturbed and/or injured. <p><i>The ecologist would assess the species and then release them to the nearest suitable habitat if uninjured.</i></p>	Construction contractor Sydney Zoo	Construction
Impacts on non-listed species across the entire construction site	<ul style="list-style-type: none"> As a precautionary measure close-off all excavations overnight, in locations where night works are not planned, to prevent animals becoming trapped Inspect each excavation prior to the works starting in the morning Have a designated qualified person that would capture any inadvertently trapped species and release the species into the nearest suitable habitat if uninjured <p>If construction lighting is required at night direct light beams away from vegetative areas to protect microbats.</p>	Construction contractor	Construction
Loss of habitat for fauna from clearance	<ul style="list-style-type: none"> Direct seed with native provenance grass seeds or sterile grasses on exposed areas. Retention of fallen logs and relocation to adjacent areas where possible to provide habitat resources for ground-dwelling species. 	Construction contractor Sydney Zoo	Construction

Impact	Environmental safeguards	Responsibility	Timing
Operational biodiversity management	<ul style="list-style-type: none"> Prevention of runoff and wastewater from the zoo entering the adjacent watercourse through the implementation of a constructed wetlands and harvesting pond in the west of the site Ongoing weed control should be undertaken along the length of the works to reduce the impacts of edge effects on adjacent vegetation. 	Sydney Zoo	Operation
Bushfire			
Bushfire management - general	Implement appropriate hazard reduction program in consultation with Western Sydney Parklands and Cumberland Zone Rural Fire Service where woodland vegetation is within or above threshold.	Sydney Zoo	Operation
Bushfire management during operation	Maintain access roads and tracks within the site and consider the following ongoing management of any buildings and landscaped areas: <ul style="list-style-type: none"> Removal of combustible material, particularly litter in gutters, near buildings. Removing excess amounts of fuel from garden areas (including organic mulch). Ensuring garden plantings do not overhang any buildings, tree canopies are discontinuous, and shrubs are not positioned within two metres of buildings. 	Sydney Zoo	Operation
Operational Bushfire Management Plan	Prepare a Bushfire Emergency Management Plan outlining evacuation routes, firefighting protocols and hydrant locations.	Sydney Zoo	Operation
Hazards and risk			
Construction hazard and risk management across the proposal	Prepare a hazard and risk management plan (HRMP) as a sub-plan of the CEMP. As a minimum, the plan would: <ul style="list-style-type: none"> Include an emergency response plan Be prepared by a suitably qualified hazard management specialist Provide for the implementation, monitoring and maintenance of the identified hazard controls. 	Construction contractor	Pre-construction
Accidental spillage and discharge across the proposal during construction	<ul style="list-style-type: none"> Keep wet and dry spill kit, sand-filled/gravel-filled socks and geotextile matting 'onsite' at all times. Train staff in the appropriate deployment, use, removal and disposal of spill kit. 	Construction contractor	Construction
Workforce and public safety during construction across the proposal	Fence off and secure the site to prevent public access.	Construction contractor	Construction
Workforce and public safety during construction across the proposal	<ul style="list-style-type: none"> Use terracing excavation methods where applicable. Backfill or cover all open excavations with boards/plates outside of working hours. 	Construction contractor	Construction
Workforce and public safety during construction across the proposal	Inspect the entry connection into the Parkland Access Road ahead of any required demobilisation to ensure there are no road-user or pedestrian hazards.	Construction contractor	Construction
Hazardous material and dangerous goods transportation to the construction site during construction	Handle and use dangerous goods and hazardous materials in accordance with: the NSW <i>Occupational Health and Safety Act 2000</i> ; the Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005); NSW Road and Rail Transport (Dangerous Goods) (Road) Regulation 1998; and Australian Government's Code for the Transport of Dangerous Goods by Road and Rail (National Transport Commission, 2008).	Construction contractor	Construction
Utility or services strike across the proposal during construction	Undertake detailed utility surveys as part of the detailed design along with utility-provider consultation.	Construction contractor Sydney Zoo	Construction
Utility or services strike across the proposal during construction	Prepare and work to a utility and services plan. No work would take place outside of this plan without additional consultation and utility searches.	Construction contractor	Construction
Hazardous material and dangerous goods transportation and storage	Handle, store and use dangerous goods and hazardous materials in accordance with: the NSW <i>Occupational Health and Safety Act 2000</i> ; the Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005); NSW Road and	Sydney Zoo	Operation

Impact	Environmental safeguards	Responsibility	Timing
across the site during operation	Rail Transport (Dangerous Goods) (Road) Regulation 1998; and Australian Government's Code for the Transport of Dangerous Goods by Road and Rail (National Transport Commission, 2008).		
Hazardous material and dangerous goods storage during operation	Hazardous materials and dangerous goods will be store within a bunded and secure storage facility on-site.	Sydney Zoo	Operation
Driver safety across the proposal during operation	Incorporate car park signage to indicate direction of travel and traffic calming devices including speed humps and speed limits,	Sydney Zoo	Detailed design/Operation
Ecologically sustainable development			
Energy efficiency measures during operation	<ul style="list-style-type: none"> Investigate opportunities for alternate energy provision after an initial review period of operation 	Sydney Zoo	Operation
Building performance during operation	<ul style="list-style-type: none"> Prepare a Section J energy efficiency assessment of the main buildings during the detailed design stage to determine possible energy saving measures 	Sydney Zoo	Detailed design
Water usage	<ul style="list-style-type: none"> Implement water efficient fittings and fixtures into building design 	Sydney Zoo	Detailed design
Transport during operation	<ul style="list-style-type: none"> Promote the use of public transport for patrons and staff Prepare an OTMP as outlined in Section 6.3.3 	Sydney Zoo	Operation
Greenhouse gas emissions during construction	<ul style="list-style-type: none"> Recycle or compost waste were possible Choose nearby sources of fill and other building materials to reduce transport emissions Ensure construction plant is regularly maintained to ensure optimum fuel efficiency Where possible, operate construction plant at lower power settings to conserve fuel, and switch off engines when not in use Plan construction activities to avoid double handling of fill and other materials. 	Construction contractor	Construction
Greenhouse gas emissions during operation	<ul style="list-style-type: none"> Utilise energy efficient building design features such as natural ventilation and lighting, and insulation Consider on-site renewable energy, such as solar power Investigate the feasibility of using electric powered mobile plant on site. 	Sydney Zoo	Operation

APPENDIX C RESIDENTIAL RECEIVERS



APPENDIX D

EXISTING VEGETATION TO RETAIN

