



# Taronga Zoo – Upper Australia Precinct Modification 1

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Replacement of approved Koala exhibit with a Dingo exhibit, amend the landscaping and fence design, increase tree removal and biodiversity offsets and amend conditions relating to bushfire management

State Significant Development Modification Assessment  
(SSD 10456 MOD 1)

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*Cover image: View of the Macropod walkthrough (Source: Applicant)*

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# Glossary

Abbreviation	Definition
<b>ACHAR</b>	Aboriginal Cultural Heritage Assessment Report
<b>Applicant</b>	Taronga Conservation Society Australia
<b>BC Act</b>	Biodiversity Conservation Act 2016
<b>BDAR</b>	Biodiversity Development Assessment Report
<b>CBD</b>	Central Business District
<b>CEMP</b>	Construction Environmental Management Plan
<b>CIV</b>	Capital Investment Value
<b>Council</b>	Mosman Council
<b>CTMP</b>	Construction and Traffic Management Plan
<b>Department</b>	Department of Planning, Industry and Environment
<b>DPI</b>	Department of Primary Industries, DPIE
<b>EESG</b>	Environment, Energy and Science Group
<b>EIS</b>	Environmental Impact Statement
<b>EPA</b>	Environment Protection Authority
<b>EP&amp;A Act</b>	Environmental Planning and Assessment Act 1979
<b>EP&amp;A Regulation</b>	Environmental Planning and Assessment Regulation 2000
<b>EPI</b>	Environmental Planning Instrument
<b>ESD</b>	Ecologically Sustainable Development
<b>FRNSW</b>	Fire and Rescue NSW
<b>GSC</b>	Greater Sydney Commission
<b>HAA</b>	Historical Archaeological Assessment
<b>HIS</b>	Heritage Impact Statement
<b>ICNG</b>	Interim Construction Noise Guidelines
<b>LEP</b>	Local Environmental Plan

<b>LGA</b>	Local Government Area
<b>LoS</b>	Level of Service
<b>LSPS</b>	Local Strategic Planning Statement
<b>Minister</b>	Minister for Planning and Public Spaces
<b>PCT</b>	Plant Community Type
<b>Planning Secretary</b>	Secretary of the Department of Planning, Industry and Environment
<b>RtS</b>	Response to Submissions
<b>SEARs</b>	Planning Secretary's Environmental Assessment Requirements
<b>SEPP</b>	State Environmental Planning Policy
<b>SRD SEPP</b>	State Environmental Planning Policy (State and Regional Development) 2011
<b>SSD</b>	State Significant Development
<b>TCSA</b>	Taronga Conservation Society Australia
<b>TfNSW</b>	Transport for NSW
<b>TIA</b>	Traffic Impact Assessment

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# 1 Introduction

This report provides an assessment of a modification application seeking approval to modify the State significant development (SSD) consent for the redevelopment of the Upper Australia Precinct located at Taronga Zoo, Mosman, NSW (SSD-10456).

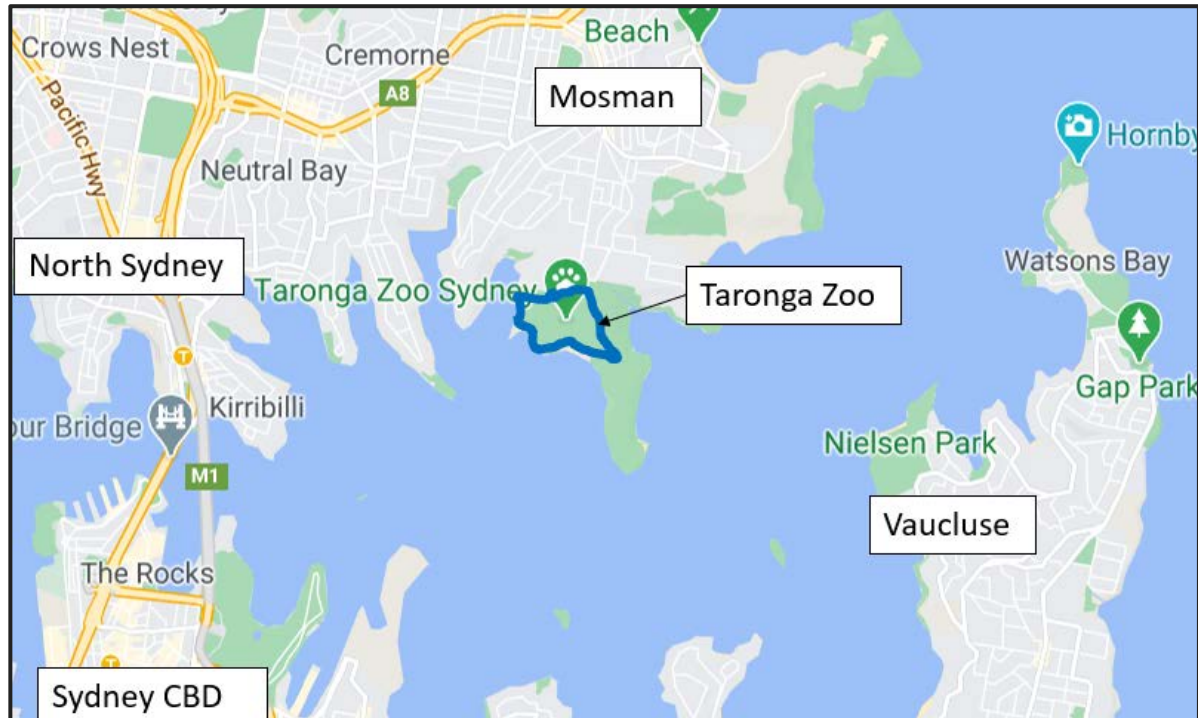
The application seeks to replace the approved Koala exhibit with a Dingo exhibit, amend the landscaping and fence design, increase tree removal and biodiversity offsets and amend conditions relating to bushfire management. The application was lodged on 20 April 2021, by Urbis on behalf of Taronga Conservation Society Australia (the Applicant) pursuant to section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

## 1.1 Site and surrounding context

Taronga Zoo is located approximately 2.5 km north-east of the Sydney Central Business District (CBD) and is situated in the Mosman local government area (LGA) (**Figure 1**).

Taronga Zoo is located on Bradleys Head Road at the southern end of Mosman on the Bradleys Head Peninsula. Taronga Zoo is approximately 28 hectares and is surrounded by Bradleys Head Road to the east, Athol Wharf Road to the south, Little Sirius Cove to the west and Whiting Beach Road to the north.

Taronga Zoo comprises a variety of animal exhibits, associated pathways, buildings and structures and the Australia Habitat and Wildlife Retreat within a landscaped setting.



**Figure 1 |** Regional Context Map (Source: Original Assessment Report; Google Maps 2020)



## 1.2 The Site

The Upper Australia Precinct (the site) is located in the north-eastern corner of Taronga Zoo and has an area of approximately 7,900 m<sup>2</sup> (**Figure 2**).

The site contains existing animal exhibits and facilities including the Avian Wetlands, Nocturnal House, Macropod Walkthrough, Koala Experience, Platypus House and Wild Ropes Course. The site contains a significant level of tree cover with approximately 198 trees located within the site.

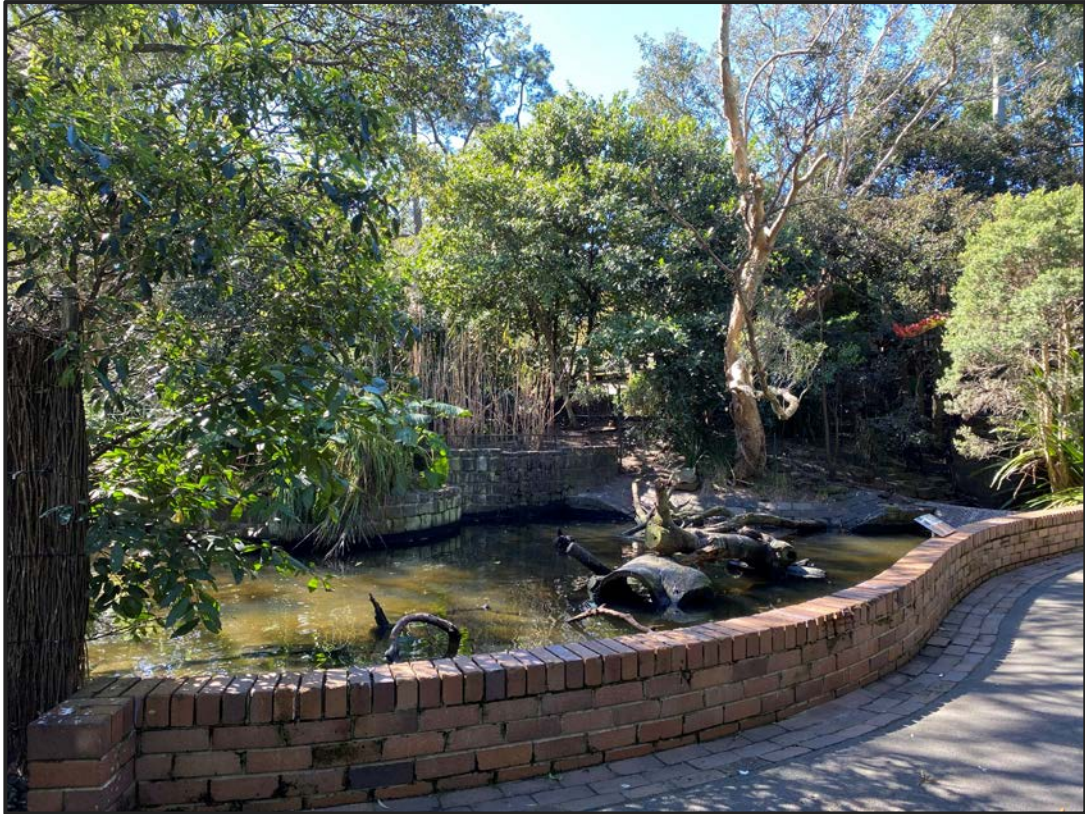
Taronga Zoo is heritage listed in the Mosman Local Environmental Plan 2012 (MLEP). The item is identified as “Rainforest Aviary”, “Elephant House”, bus shelter and office, floral clock and upper and lower entrance gates’. None of the items individually noted in the MLEP listing are located within the Upper Australian Precinct (subject site). A total of 14 items listed on the Zoological Parks Board Section 170 Heritage and Conservation Register are located within the site.

Views of the site are shown in **Figure 3** to **Figure 7**.



**Figure 2 |** The site shown in red outline and Taronga Zoo shown in blue outline (Source: Original Assessment Report; NearMap 2020)





**Figure 3 |** Avian wetlands (Source: Department)



**Figure 4 |** Wild Ropes Course along Dingo Road (Source: Department)





**Figure 5 |** Nocturnal House (Source: Department)



**Figure 6 |** Platypus House (Source: Department)





**Figure 7 |** Koala experience (Source: Department)

### **1.3 Surrounding Site Context**

Immediately to the north of the site are existing zoo facilities, further north of the Zoo is the residential area of Mosman which comprises one and two-storey dwelling houses.

Directly south of the site are existing zoo facilities, including the Australia Habitat and Taronga Zoo Wildlife Retreat. Further south of the Zoo is Sydney Harbour and Taronga Zoo Ferry Wharf. The site is bound by Bradleys Head Road to the east, beyond which is Sydney Harbour National Park.



**Figure 8** | Surrounding site context (Source: Original Assessment Report; NearMap 2020)

## 1.4 Approval history

On 21 December 2020, the Executive Director, Key Sites and Regional Assessments approved consent for the redevelopment of the Upper Australia Precinct located in Taronga Zoo, Mosman (SSD-10456).

The main components of this development are outlined in **Table 1**. The consent has not been modified previously.



**Table 1 |** Main Components of the development (Source: Assessment Report (SSD 10456))

Aspect	Description
<b>Demolition and excavation</b>	<ul style="list-style-type: none"><li>• Demolition of the Avian Wetland Ponds and partial demolition of the Nocturnal House and Ropes Course.</li><li>• Excavation along the western boundary of the Avian Wetland Ponds and southern boundary of the precinct.</li></ul>
<b>Animal exhibits</b>	<ul style="list-style-type: none"><li>• Refurbishment of the Nocturnal House, including a new exhibit design and layout and reconfiguration of access arrangements to provide a separate entry and exit point.</li><li>• Construction of a Koala Treehouse and elevated walkway.</li><li>• Extension of the Macropod walkthrough.</li></ul>
<b>Other built structures</b>	<ul style="list-style-type: none"><li>• Construction of a new western pavilion.</li><li>• New Ropes Course access bridge.</li><li>• Upgrades to back-of-house facilities for animal care.</li><li>• Additional toilets and amenities for staff and visitors.</li><li>• A new fence along Bradleys Head Road.</li></ul>
<b>Landscaping and access</b>	<ul style="list-style-type: none"><li>• Removal of 37 trees consisting of low to moderate retention value.</li><li>• Additional native plantings.</li><li>• Construction of the 'Escarpment Walk' and 'Southern Link' to provide an accessible path from the Koala Treehouse to the Nocturnal House and Dingo Road.</li></ul>
<b>Utilities</b>	<ul style="list-style-type: none"><li>• Utility adjustments.</li></ul>

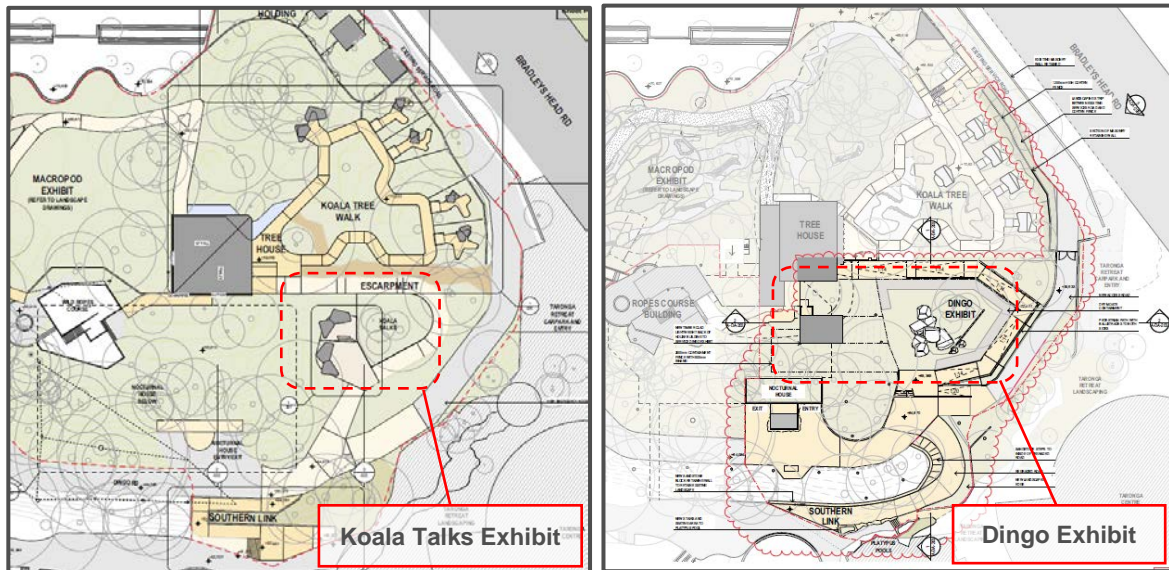
## 2 Proposed modification

The application seeks to replace the approved Koala exhibit with a Dingo exhibit, amend the landscaping and fence design, increase tree removal and biodiversity offsets and amend conditions relating to bushfire management

A summary of the proposed changes as modified by the RtS is provided below. The Department notes proposed amendments to Condition D3 and the merging of Conditions D21 and D22, as amended by the RtS, are consistent with advice provided by RFS.

**Table 2 | Proposed Plan Changes**

Aspect	Proposed Change
<b>Change in Exhibit Layout</b>	<ul style="list-style-type: none"> <li>Change the approved koala exhibit area (Koala Talks) to a Dingo exhibit (<b>Figure 9</b>).</li> </ul>
<b>Bradley's Head Fence</b>	<ul style="list-style-type: none"> <li>Amend the Bradley's Head Road fence design to a smaller 'koala containment fence'. As the revised fence will be of a more permeable design, the modification seeks to remove the Aboriginal artwork originally incorporated (<b>Figure 10</b>).</li> </ul>
<b>Access</b>	<ul style="list-style-type: none"> <li>Changes to the Southern Link walkway and the dingo exhibit pathway (<b>Figure 9</b>).</li> </ul>
<b>Tree Removal</b>	<ul style="list-style-type: none"> <li>Removal of 6 additional trees previously identified for retention.</li> </ul>
<b>Condition B16 Fire Safety</b>	<ul style="list-style-type: none"> <li>Wording proposed to be amended (wording below).</li> </ul>
<b>Condition B24 Biodiversity offsets</b>	<ul style="list-style-type: none"> <li>Wording proposed to be amended (wording below).</li> </ul>
<b>Condition B30 CEMP</b>	<ul style="list-style-type: none"> <li>Wording proposed to be amended (wording below).</li> </ul>
<b>Condition B52 Fence</b>	<ul style="list-style-type: none"> <li>Deleted due to the revised design of the Bradley's Head Road fence.</li> </ul>
<b>Condition C41 Tree protection</b>	<ul style="list-style-type: none"> <li>Proposed to be amended (wording below).</li> </ul>
<b>Condition D3 Bushfire management</b>	<ul style="list-style-type: none"> <li>Proposed to be amended (wording below).</li> </ul>
<b>Condition D21 Tree planting &amp; landscape works</b>	<ul style="list-style-type: none"> <li>Proposed to be merged with Condition D22 (wording below).</li> </ul>
<b>Condition D22 Tree planting &amp; landscape works</b>	<ul style="list-style-type: none"> <li>Proposed to be merged with Condition D21 (wording below).</li> </ul>



**Figure 9 | Exhibit Layout: approved (left), proposed (right) (source: Applicant)**



**Figure 10 | Bradley's Head Road fence: approved (above), proposed (below) (Source: Applicant)**



The Applicant has requested the following wording for Conditions B16, B24, B30, B52, C41, D3, D21 and D22 (words proposed to be added are shown in **bold and underline** and those to be deleted are shown in ~~strikethrough~~):

#### Fire Safety

B16. The provision of **any new services including** water, electricity and gas must comply the following in accordance with Table 5.3c of Planning for Bush Fire Protection 2019:

- reticulated water is to be provided to the development where available;
- fire hydrant, spacing, design and sizing complies with the relevant clauses of Australian Standard AS2419.1:2005;
- hydrants are not located within any road carriageway;
- all above-ground water service pipes are metal, including and up to any taps;
- where practicable, electrical transmission lines are underground;
- where overhead, electrical transmission lines are proposed as follows:
  - (a) lines are installed with short pole spacing (30 metres), unless crossing gullies, gorges or riparian areas;
  - (b) no part of a tree is closer to a power line than the distance set out in accordance with the specifications in ISSC3 Guideline for Managing Vegetation Near Power Lines.

#### Biodiversity Offsets

B24. A total of ~~4~~ **5** ecosystem credits and ~~3~~ **4** species credits must be retired prior to the commencement of any vegetation clearing. Details confirming compliance must be provided to the Certifier and Planning Secretary.

#### Construction Environmental Management Plan

B30. Prior to the commencement of works, the Applicant shall ~~prepare and~~ implement **an updated** Construction Environmental Management Plan (CEMP) for the development and be submitted to the Certifier. The CEMP must:

*(no change to (a) to (s))*

- (t) include the relevant recommendations detailed in the Arboricultural Impact Assessment, prepared by Sydney Arbor Trees, dated 18 June 2020, **as amended by Arboricultural Impact Assessment, prepared by Sydney Arbor Trees, dated 30 March 2021 and Arboricultural Impact Assessment, prepared by Sydney Arbor Trees, dated 9 June 2021;**
- (u) include a site-specific tree protection plan
- (v) include the relevant recommendation and mitigation measures detailed in the Biodiversity Development Assessment Report, prepared by Narla Environmental, dated 4 November 2020, **as amended by Biodiversity Development Assessment Report, prepared by Narla Environmental, dated June 2021;**

*(no change to (w))*

In the event of any inconsistency between the consent and the CEMP, the consent shall prevail.

Prior to the commencement of works, details demonstrating compliance with the above requirements (Condition B30 (a)-(w)) must be submitted to the Certifier. A copy of the CEMP must be submitted to the Certifier, Council and the Planning Secretary.

### Fence Along Bradleys Head Road

~~B52. Prior to the commence of works, the Applicant must further develop the proposed fence along Bradleys Head Road in consultation with an Aboriginal Art Consultant.~~

### Protection of Trees

C41. During construction, trees must be managed in accordance with the site-specific tree protection plan in the CEMP and in accordance with the relevant recommendations detailed in the Arboricultural Impact Assessment, prepared by Sydney Arbor Trees, dated 18 June 2020 **as amended by Arboricultural Impact Assessment, prepared by Sydney Arbor Trees, dated 30 March 2021 and Arboricultural Impact Assessment, prepared by Sydney Arbor Trees, dated 9 June 2021;**

### Bushfire Emergency Management and Evacuation Plan/Bushfire Management Plan

D3. The existing ~~Bush Fire Emergency Management and Evacuation Plan/Bushfire Management Plan~~ **Taronga Zoo Emergency Response Plan** must be updated to include the redevelopment of the Upper Australia Precinct and be consistent with the NSW RFS document: A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan. ~~Specific updates should include:~~

#### **Recommended actions include:**

- (a) emphasis that evacuation routes are to be into the zoo site toward the west (away from the bushfire hazard outside the eastern boundary of the zoo) and not to the overflow carpark to the north.
- (b) re-assessment of the bushfire risk rating considering the Mosman North Sydney Willoughby Bush Fire Management Committee Bush Fire Risk Management Plan 2017-2022 assessment of the likelihood of a bush fire as 'Likely' and the consequence as 'Catastrophic'
- (c) consideration should be given to the planned closure of the zoo based on specific triggers such as Extreme and/or Catastrophic Fire Danger Rating forecasts.

~~The updated Bush Fire Emergency Management and Evacuation Plan/Bushfire Management Plan shall: be prepared by a suitably qualified bushfire consultant in consultation with FRNSW and Mosman Council; demonstrate compliance with the above requirements; and be submitted to and approved by NSW RFS prior to the release of any Occupation Certificate. Any variations to the above requirements must be made to the satisfaction of NSW RFS.~~

**The update to the plan should include provisions so that evacuation routes from the Upper Australia Precinct are to be away from the bushfire hazard outside the eastern boundary of the site.**

A copy of the updated plan shall be submitted to NSW RFS, FRNSW, Planning Secretary, the Certifier, Mosman Council and the Local Emergency Management Committee prior to the commencement of the use.

### Tree Planting and Landscape Works

Condition D21 and D22 are proposed to be merged into a single condition, the proposed wording is as follows:

D21. **The Zoo's Vegetation Management Plan is to be updated to include the approved development and associated landscaping and revegetation, including a proposed schedule of maintenance to ensure a reduced risk of bushfire spread to the proposed exhibit and the overall zoo.**

**The updated plan should be prepared in consultation with an accredited bushfire consultant, and should provide an appropriate combination of the following measures to**

manage the risk of bushfire to the proposed exhibit and spread from the exhibit to the overall zoo;

- (a) compatibility with animal welfare, creation of habitat within the exhibit and containment requirements;
- (b) Taronga Zoo's own horticulture and public safety requirements including the Taronga Zoo Emergency Response Plan; and
- (c) Relevant principles of Appendix 4 of Planning for Bushfire Protection 2019 for an Outer Protection Area (OPA), and the following:
  - (i) A species list of all plantings including estimated size at maturity and a preference for species with low flammability;
  - (ii) A maintenance regime that provides for ongoing adequate canopy separation between trees i.e. thinning and regular pruning to avoid adjoining canopies, and provides for ongoing pruning of lower limbs of trees where not essential for animal welfare;
  - (iii) Adequate spacing between plantings to avoid continuous vegetation pathways resulting in the creation of fire paths toward proposed structures;
  - (iv) Regular removal of fine fuels to maintain a fuel reduced landscape;
  - (v) Suitable impervious areas are provided immediately surrounding the proposed structures such as pathways;
  - (vi) Species are avoided, where possible, that have rough fibrous bark, or which keep flash shed bark in long strips or retain dead material in their canopies;
  - (vii) Smooth barks species of trees are chosen for additional trees where possible which generally do not carry fire up the bark into the crown; and
  - (viii) Planting of deciduous species are avoided which may increase fuel at surface/ground level.

A copy of the updated plan demonstrating compliance with the above requirements and the Taronga Zoo Emergency Response Plan shall be submitted to NSW RFS, FRNSW and the Planning Secretary, prior to the commencement of use. Any variations to the above requirements must be made to the satisfaction of NSW RFS.



## 3 Statutory context

### 3.1 Scope of modifications

The Department has reviewed the scope of the modification application and considers that the application can be characterised as a modification involving minimal environmental impacts as the proposal:

- would not significantly increase the environmental impacts of the project as approved
- is substantially the same development as originally approved

Therefore, the Department is satisfied the proposed modification is within the scope of section 4.55(1A) of the EP&A Act and does not constitute a new development application. Accordingly, the Department considers that the application should be assessed and determined under section 4.55(1A) of the EP&A Act rather than requiring a new development application to be lodged.

### 3.2 Consent authority

The Minister for Planning and Public Spaces is the consent authority under section 4.5(a) of the EP&A Act. However, in accordance with the Minister's delegation, the Team Leader, Key Sites Assessments, may determine this application as:

- a political disclosure statement has not been made
- there are no public submissions (other than a Council) in the nature of objections
- Council has not made a submission by way of objection.

### 3.3 Mandatory matters for consideration

Section 4.15 of the EP&A Act outlines the matters that a consent authority must take into consideration when determining development applications. The matters considered as part of the original application are as follows:

- provisions of environmental planning instruments (including draft instruments), development control plans, planning agreements, and the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation)
- the environmental, social and economic impacts of the development
- the suitability of the site
- any submissions
- the public interest, including the objects of the EP&A Act and the encouragement of ecologically sustainable development (ESD).

The Department has considered all of these matters in its assessment of the proposal. The Department has also given consideration to the relevant matters in **Section 5** and **Appendix B**.

## 4 Engagement

### 4.1 Department's engagement

Clause 117(3B) of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) specifies that the notification requirements of the EP&A Regulation do not apply to section 4.55(1A) modifications with minimal environmental impact applications. Accordingly, the application was not notified or advertised.

However, it was made publicly available on the Department's website on 23 April 2021, and was referred to the Council, Environment, Energy and Science Group (EESG), Fire & Rescue NSW (FRNSW), NSW Rural Fire Service (RFS), Heritage Council of NSW, and the Department of Primary Industries for comment.

### 4.2 Summary of submissions

The key issues raised by Government agencies are summarised in **Table 3** below.

**Table 3 | Government agency submissions**

Government agency	Comments
Mosman Council	<b>Application</b> <ul style="list-style-type: none"> <li>No issues with the proposed modification.</li> </ul>
EESG	<b>Application</b> <ul style="list-style-type: none"> <li>The 4 ecosystem credits required to offset the biodiversity impacts of the proposed development differs from the total of 5 shown in Table 15 of the BDAR.</li> <li>The credit requirement for impacted 'zone 1' vegetation has not increased despite an increase in the impacted area.</li> <li>The credit requirement for impacted 'zone 2' vegetation has increased with no change in impacted area.</li> <li>The offset requirements for ecosystem credits should be verified and any errors in the BDAR be corrected.</li> </ul> <b>Response to Submissions</b> <ul style="list-style-type: none"> <li>Previous comments have been addressed in the updated BDAR.</li> </ul>
FRNSW	<b>Application</b> <ul style="list-style-type: none"> <li>No comments or recommendations regarding the proposed modification.</li> <li>Further consultation should be undertaken with FRNSW when more detailed information regarding the fire and safety aspects of the development becomes available.</li> </ul>
RFS	<b>Application</b> <ul style="list-style-type: none"> <li>The information provided is not sufficient in justifying the proposed changes.</li> <li>The exhibit is directly adjacent to the hazard to the east, the main entrance, and the higher risk Habitat &amp; Wildlife Retreat development to the south; therefore, it is important to ensure a reduction of fire spread into the zoo.</li> </ul>

- Further information is required detailing the specific nonconformities and how many proposed revision or rewarding could prevent the spread of fire into the zoo either from ground level or via the tree canopy.

#### Condition B17

- The removal of Condition B17 is not accepted.
- Based on the information provided it is unclear where the development cannot comply. Further information is required to clarify this.
- Alternative wording is recommended to ensure any future work will provide adequate services of water for the protection of structures during and after the passage of a bushfire, and to locate gas and electricity so as not to contribute to the risk of fire.

#### Condition D3

- The proposed rewording of Condition D3 is partially accepted.

#### Condition D22 & D23

- The proposed rewording of Conditions D22 and D23 is not accepted.
- The information provided for this modification does not state which sections of the conditions cannot be complied with or provide detailed assessment of the proposal against the condition.
- The proposed wording places bushfire management as the last priority and removes any specific guidelines.

#### **Response to Submissions**

- The proposed change to Condition B16 was acceptable.
- The proposed change to Condition D3 was acceptable, subject to a minor revision to the Applicants proposed wording. The Applicant accepted the advice from RFS.
- The proposed change to Conditions D21 and D22 was not accepted and these conditions should be reworded and combined. The Applicant accepted the advice from RFS.

<b>Heritage Council of NSW</b>	<p><b>Application</b></p> <ul style="list-style-type: none"> <li>• The modification area is identified in the Historical Archaeological Assessment (2020) (HAA) as having no potential subsurface archaeological evidence to remain (HAA, figure 23).</li> <li>• The original approval for the upper Australia precinct was subject to heritage Conditions B20 and B21, which requires the recommendations of the HAA be implemented and an Unexpected Finds protocol be prepared.</li> <li>• In the event any excavation occur outside the area identified as having no potential for subsurface archaeological evidence to remain, the Unexpected Finds protocol should come into effect and a qualified historical archaeologist should assess and report upon the finds in accordance with the Heritage Council guidelines and requirements of s146 of the NSW Heritage Act 1977.</li> </ul>
<b>Department of Primary Industries</b>	<p><b>Application</b></p> <ul style="list-style-type: none"> <li>• No recommendations regarding the proposed modification.</li> </ul>

#### **Public Submissions**

No public submissions were received.

### **4.3 Response to submissions**

The Department placed copies of all submissions received on its website and requested the Applicant provide a response to the issues raised in the submissions.

The Applicant held a meeting with TSCA, RFS, DPIE, Urbis and Australian Bushfire Consultants on 23 June 2021 to discuss and resolve the matters raised in the RFS submission. The Applicant subsequently provided RFS with revised amended conditions. The RFS provided comments as outlined in **Table 3**.

On 2 July 2021, the Applicant provided a Response to Submissions (RtS). The RtS included an updated Biodiversity Development Assessment Report (BDAR) and amendments to the change of conditions relating to bushfire. The RtS was made publicly available on the Department's website.

The Department forwarded the RtS to Environment, Energy and Science Group (EESG) for comment. EESG advised there were errors in the updated BDAR submitted with the RtS and recommended the offset requirements be verified and any errors corrected.

On 20 July 2021, the Applicant provided a revised BDAR, which EESG advised adequately addressed its previous comments.



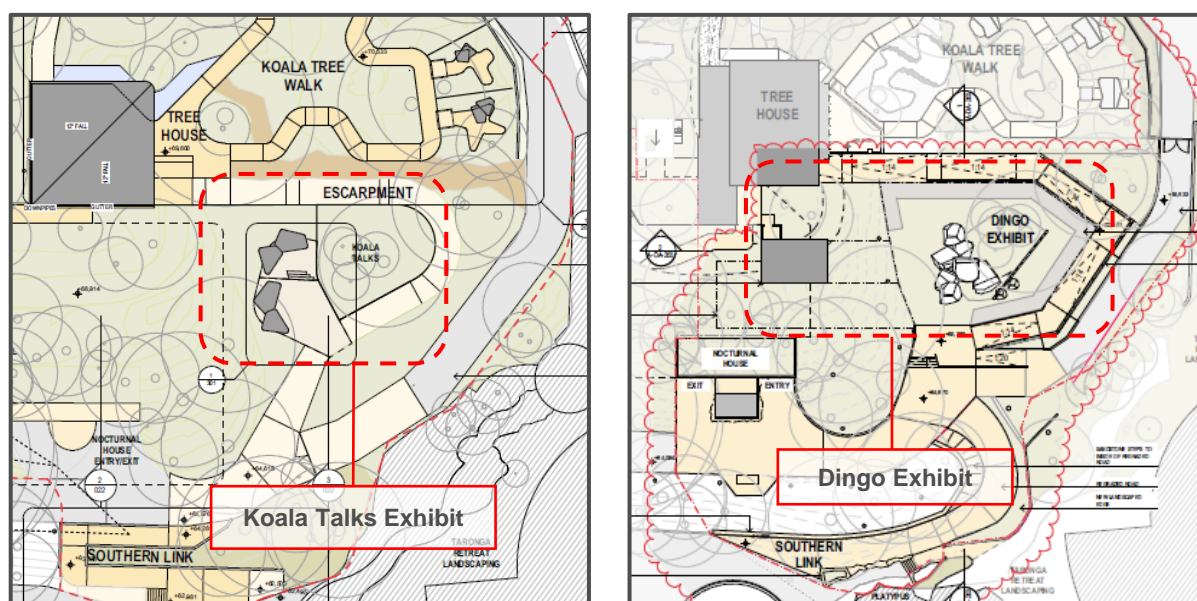
## 5 Assessment

The proposed modification seeks to replace the approved Koala exhibit with a Dingo exhibit, amend the landscaping and fence design, increase tree removal and biodiversity offsets and amend conditions relating to bushfire management. In assessing the merits of the proposal, the Department has considered:

- the modification application and associated documents
- the Environmental Assessment and conditions of approval for the original application
- relevant environmental planning instruments, policies and guidelines
- Council and government agency submissions
- the requirements of the EP&A Act and Regulation.

### 5.1 Built Form

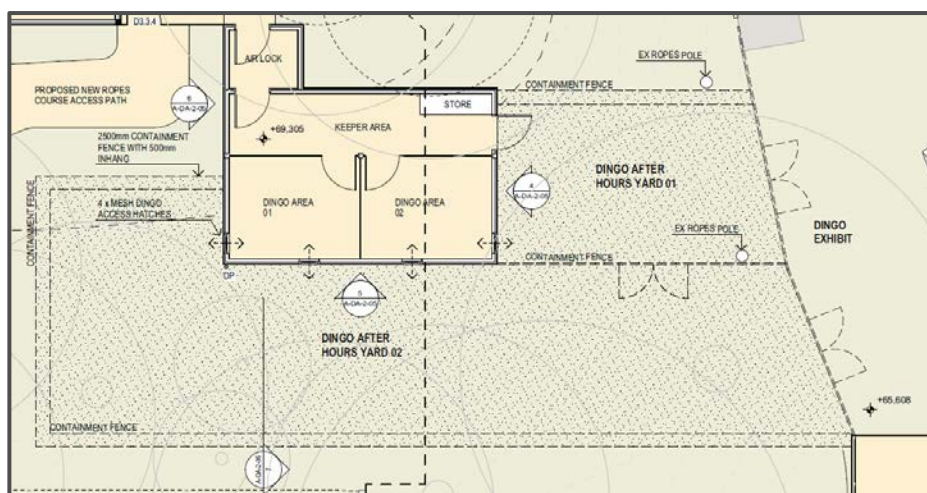
The approved development included a koala exhibit area ('Koala Talks'). The proposed modification seeks to replace the Koala Exhibit with a Dingo exhibit, as shown in **Figure 11**. The Applicant advised the reason for the change is that the area previously intended to be a koala exhibit area (Koala Talks) is no longer considered to provide positive animal welfare conditions for koalas.



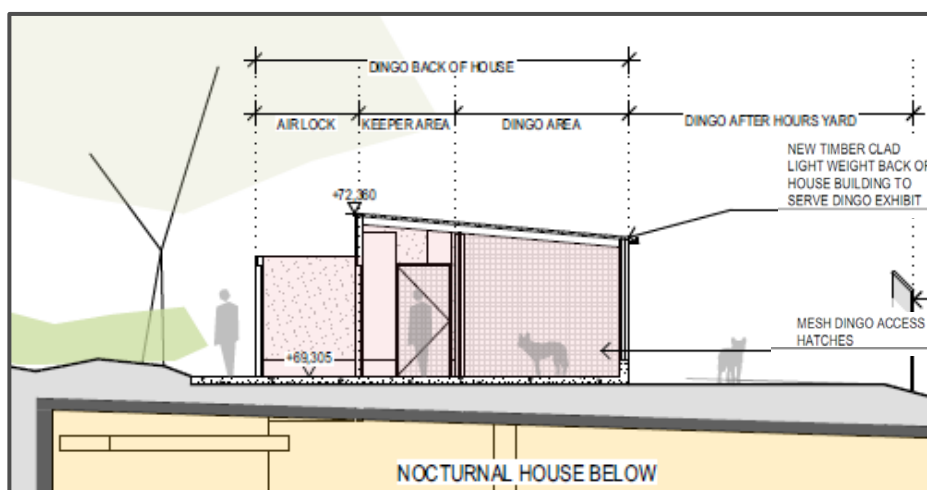
**Figure 9 | Exhibit Layout: approved (left), proposed (right) (source: Applicant)**

The exhibit area has been increased to ensure adequate space and a high standard of welfare is provided for the dingoes. To accommodate the dingoes, the landscaping of the exhibit has been modified, including the addition of rocks/boulders and trees (discussed further in **Section 5.4**). The exhibit would also be partially surrounded with a dry moat containment.

In addition to the main dingo exhibit, the modification includes a back-of-house (BOH) building and two dingo after hours yards, as shown in **Figure 12**. In terms of mass, the BOH building will have an area of 45 m<sup>2</sup> with a maximum height of 3 m to service the dingo exhibit. The BOH building will utilise materials consistent with the Tree House Building, including weatherboard timber cladding, a Colourbond roof and black chainlink mesh.



**Figure 10 | Dingo BOH Building: Ground Floor Plan (above), N/S section (below) (source: Applicant)**



The Department considers the revised exhibit layout to be acceptable as it would result in minimal changes to the overall built form of the Upper Australia Precinct.

The Department therefore concludes the revised exhibit layout is acceptable.

## 5.2 Bushfire impacts

The site is mapped as bushfire prone land in Council's bushfire prone land map. In consideration of this, RFS recommended a series of conditions as part of the original application. These conditions include an updated Bushfire Emergency and Evacuation Plan, Vegetation Management Plan and Landscaping Plan. RFS also recommended a condition to ensure that water, electricity and gas comply with Planning for Bushfire Protection 2019.

The proposed modification seeks to amend the wording of Conditions B16 and D3 and consolidate Conditions D21 and 22 as outlined in **Section 4.3**. The proposed wording was recommended by RFS following consultation with the Applicant. The Applicant provided the following rational for the proposed changes:

- **Condition B16:** The modification seeks to amend the condition to clearly emphasise that it relates only to new services on site.

- Condition D3: The modification seeks to amend the condition to specify 'Taronga's Emergency Response Plan' rather than a 'Bushfire Management Plan'.

The Applicant advised this is because the Taronga's Emergency Response Plan incorporates evacuation management for various emergency events (including bushfires), and that the plan will be submitted to NSW RFS prior to the commencement of the use.

- Conditions D21 and D22: The modification seeks to replace Conditions 21 and 22 with a new condition following discussions with RFS.

The Applicant advised the zoo would be unable to achieve the bushfire requirements specified in the original condition due to animal welfare requirements. The revised condition was recommended by RFS and is considered to provide a level of bushfire protection while also addressing animal welfare requirements.

The Department considers the changes to conditions to be acceptable as the:

- proposed change clarifies the intent of Condition B16
- proposed change to Condition D3 will provide adequate bushfire management while also reflecting Taronga's Emergency Response Plan, which considers evacuation management for emergency events including bushfires
- the rewording and amalgamation of Conditions D21 and D22 acknowledges the context of the site and provides bushfire protection while also addressing animal welfare requirements
- RFS supports the proposed wording.

### 5.3 Tree removal and biodiversity

The approved development involved the removal of 37 trees to facilitate the works. The modification proposes to remove an additional 6 trees, resulting in a cumulative loss of 41 trees. The additional trees to be removed are shown in **Table 4** and **Figure 13** below.

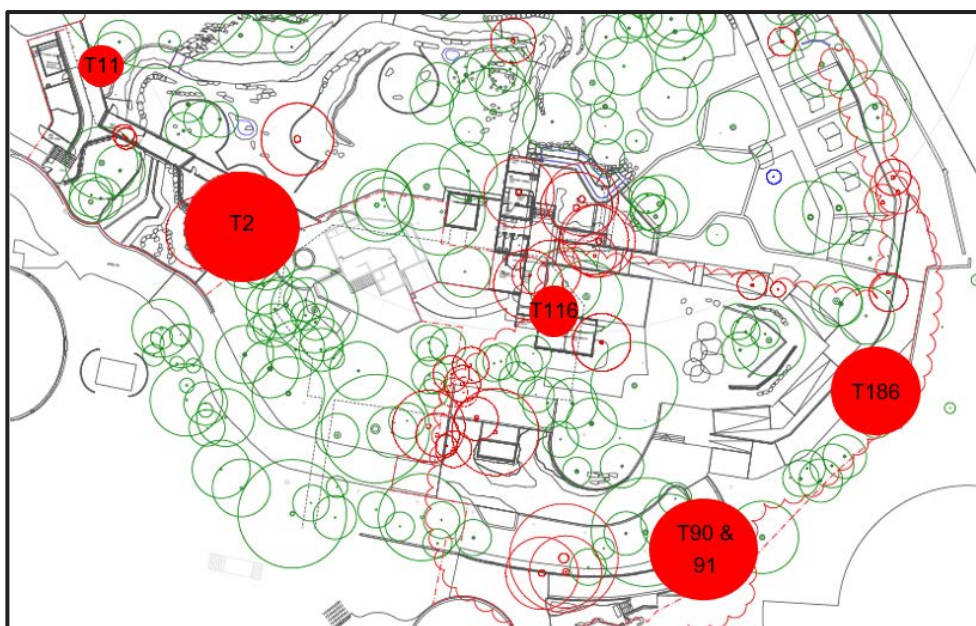
**Table 4 | Additional trees proposed for removal**

Tree #	Species	Significance	Reason
2	Broad-leaved paperbark (Melaleuca quinquenervia)	Low	<ul style="list-style-type: none"> <li>• The tree was intended to be retained as part of the original approval; however, the assessment found a significant defect with a basal termite infection reducing the structural integrity of the tree.</li> <li>• Approved plans include a deck with a major encroachment into the Structural Root Zone (SRZ) .</li> <li>• While the deck could be installed with tree sensitive design, the current health of the tree poses a high risk of tree failure.</li> </ul>
11	Water Gum (Tristania laurina)	Low	<ul style="list-style-type: none"> <li>• The tree was intended to be retained as part of the original approval; however, following early works on site the development was determined to impact the tree.</li> <li>• Approved plans include a ramp of sandstone spalls transitioning into a boardwalk with a major</li> </ul>

encroachment into the SRZ and Tree Protection Zone (TPZ).

- The structure will require the removal of a large portion of the tree's root zone and the canopy on the western side of the tree.
- The combined root impact and canopy removal will modify the trees ability to function and will adversely impact the subject tree.

90	Swamp mahogany (Eucalyptus robusta)	Medium	<ul style="list-style-type: none"> <li>• The tree is within the footprint of the revised design of the Southern Link ramp.</li> </ul>
91	Swamp mahogany (Eucalyptus robusta)	Low	<ul style="list-style-type: none"> <li>• The tree is within the footprint of the revised design of the Southern Link ramp.</li> </ul>
116	Bangalay (Eucalyptus botryoides)	Low	<ul style="list-style-type: none"> <li>• The addition of the dingo BOH area results in a major encroachment into the SRZ &amp; TPZ.</li> <li>• The building requires footings that intersect with the SRZ on both the southern and western side of the truck.</li> <li>• The combined encroachment will remove a significance portion tree's root zone, which will restrict its ability to function at a basic level.</li> </ul>
186	Swamp mahogany (Eucalyptus robusta)	Medium	<ul style="list-style-type: none"> <li>• The stability of the tree has been reduced through the demolition of the former platypus enclosure northeast of the tree and the retaining wall southeast of the tree.</li> <li>• The addition of the access road will further compromise the tree. This increases the probability of failure, which has the potential to impact existing structures to the south-east such as the 'Retreat' and the proposed dingo exhibit to the north-west.</li> </ul>



**Figure 11 |** Additional trees proposed to be removed highlighted in red (source: Applicant's Arborist report and Addendum Arborist Report)



The Applicant submitted an updated Biodiversity Development Assessment Report with the RtS and an Arboricultural Impact Assessment (AIA).

As discussed in **Section 4.3**, EESG advised there were errors in the updated BDAR submitted with the RtS and recommended the offset requirements be verified and any errors corrected. The Applicant subsequently provided a revised BDAR, which EESG advised adequately addressed its previous comments.

The BDAR notes much of the development is located within historically cleared land that has been further modified by the creation of animal enclosures comprised of man-made structures and planted, landscaped vegetation.

The native vegetation impacted by the approved development was identified to be 0.17 ha of the Smooth-barked Apple – Coast Banksia / Cheese Tree open forest on sandstone slopes on the foreshores of the drowned river valleys of Sydney Plant Community Type (PCT).

The revised BDAR outlined the proposed modifications will impact an additional 0.03 ha totalling 0.20 ha of the PCT. Due to this increase, a total of 5 ecosystem credits were identified to be required to mitigate impacts upon biodiversity from the modified proposal.

Additionally, the approved development was identified to result in the removal of potential foraging habitat for a species of vesper bat (Southern Myotis) and required 3 species credits for the Southern Myotis. Due to the additional removal of potential foraging habitat proposed as part of the modification, a total of 4 ecosystem credits are required.

The AIA identified the trees to be removed are of low (4) to medium (2) significance within the landscape, as shown in **Table 4**. None of the trees proposed to be removed are of heritage significance. The findings of the AIA (and addendum AIA) were that the removal of the 6 additional trees could be supported to facilitate the development.

The Department considers the additional tree removal and biodiversity impacts are acceptable as:

- none of the additional trees to be removed are of heritage significance and of the 6 additional trees to be removed 2 are of medium significance within the landscape, with the remaining of low significance
- existing conditions ensure the trees to be retained are be managed in accordance with recommendations detailed in the AIA and addendum AIA
- biodiversity impacts would continue to be managed in accordance with management measures detailed in the original and updated BDAR.
- EESG support the proposal and the increased biodiversity offset requirements.

The Department therefore recommends Condition B24 (Biodiversity Offsets) be updated to reflect the revised biodiversity offset credit requirements.

Subject to the compliance with conditions, the Department considers the proposed tree removal and biodiversity impacts are acceptable.

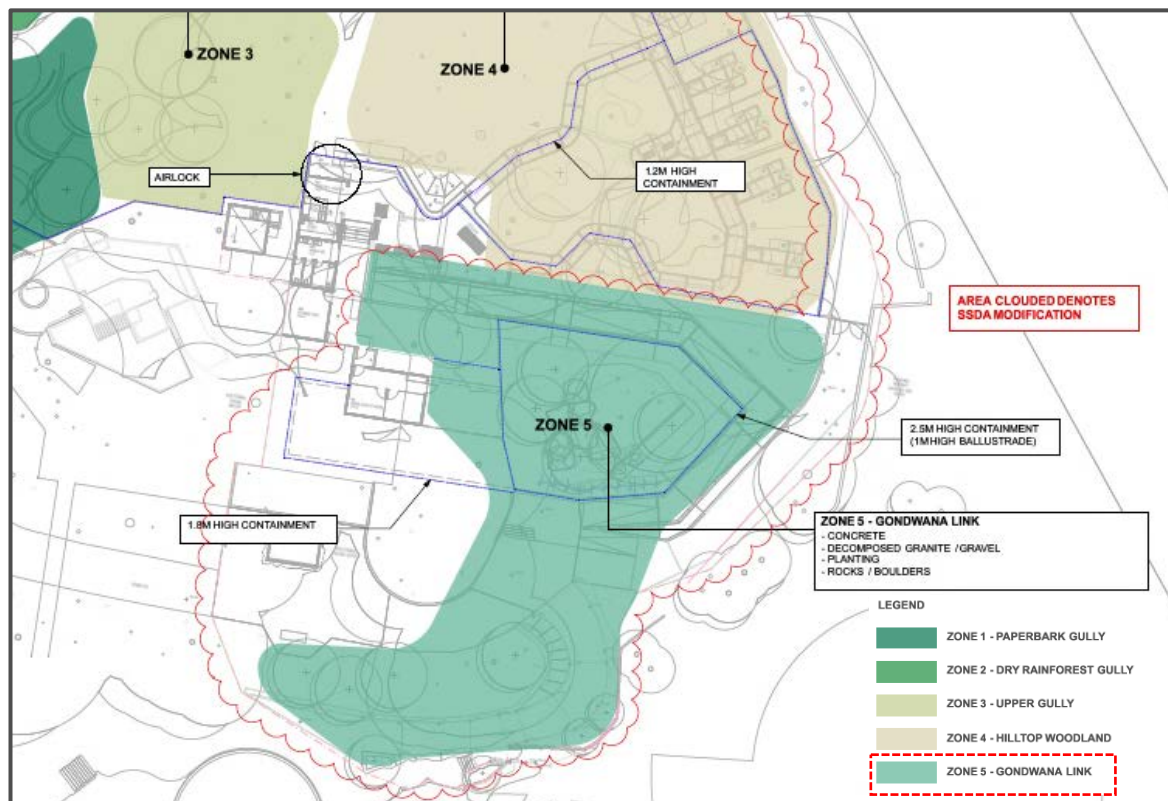
## 5.4 Landscaping

The approved development includes planting and landscaping that will create six distinct Australian landscape zones with native trees and vegetation as well as hard landscaping consisting of pathways, rocks and boulders and seating. Furthermore, the development involves the extension of the existing Macropod Walkthrough and the construction of two main pathways known as “The Escarpment Walk” and the ‘Southern Link’.

The proposed modification seeks to make changes to the landscaping of Zone 5 ‘Gondwana Link’, as shown in **Figure 14** below.

These changes are to ensure the exhibit can provide adequate animal welfare to dingoes, as opposed to Koalas. The changes include the addition of rocks/boulders and planted vegetation such as trees and a 2.5 m high containment fence and partially surrounded by a dry moat containment. The approved and proposed Landscape Plan for Zone 5 is shown in **Figure 15** below.

**Table 5** below provides a comparison of the main components of the approved and proposed landscaping for Zone 5 (excluding shrubs and ground cover).



**Figure 12 | Landscaping Zone** (source: Applicant)



**Figure 13 | Zone 5 Landscaping Plan: approved (left), proposed (right) (source: Applicant)**

**Table 5 | Approved and proposed landscaping for Zone 5 (excluding shrubs and ground cover)**

Aspect	Approved Zone 5 Landscaping	Proposed Zone 5 Landscaping
<i>Surface Treatment</i>	<ul style="list-style-type: none"> <li>Exposed aggregate concrete</li> <li>Decomposed granite / gravel</li> <li>Recycled bricks</li> <li>Planting</li> <li>Stepping stones</li> <li>Rocks / boulders</li> </ul>	<ul style="list-style-type: none"> <li>Concrete</li> <li>Decomposed granite / gravel</li> <li>Planting</li> <li>Rocks / boulders</li> </ul>
<i>Trees</i>	<ul style="list-style-type: none"> <li>Sydney Red Gum</li> </ul>	<ul style="list-style-type: none"> <li>Grey Gum</li> <li>Blueberry Ash</li> <li>Sydney Red Gum</li> <li>Scribbly Gum</li> </ul>
<i>Fence</i>	<ul style="list-style-type: none"> <li>1.2 m high corten steel</li> </ul>	<ul style="list-style-type: none"> <li>2.5 m high mesh fence with 0.5 m inhang</li> </ul>

The Department notes the exhibit area has been increased to ensure adequate space and a high standard of welfare is provided for the dingoes, which has resulting in amendments to the pathway surrounding the exhibit. In addition to this, the proposed modification seeks to make changes to the Southern Link pathway as shown in **Figure 15**.

The Applicant provided a statement prepared by Matt Shuter and Associates assessing the proposal against accessibility requirements and Australian Standards. Overall, this concluded the revised design was capable of achieving compliance with the relevant accessibility requirements, subject to further details provided during the detailed design stage.

The proposal also includes the removal of additional trees, as discussed in **Section 5.3**. The Applicant advised that while no trees have been specifically included to 'replace' the trees proposed for removal, additional native trees, including Grey Gum, Blueberry Ash, Sydney Red Gum and Scribbly Gum, would be incorporated across the site to provide shelter for animals within the precinct and reflect the Australian landscape character.

The Department considers the landscaping to be acceptable as it provides for the ongoing welfare of dingoes in the exhibit and would not significantly change the appearance of the approved development.

## 5.5 Other issues

The Department's consideration of other issues is provided within **Table 6**.

**Table 6 | Department's assessment of other issues**

Issue	Findings	Recommendations
<b>Bradley's Head Road</b>	<ul style="list-style-type: none"> <li>The approved fence was to be constructed from coloured fibre cement panels with a maximum height of 4 m and a landscaped strip at the front. The approved fence also was required to incorporate Aboriginal artwork (Condition B52).</li> <li>The proposal seeks to reduce the height of the fence from 4 m to 1.2 m and change its material from fibre cement panels to corten steel.</li> <li>The proposal also seeks to remove the requirement for Aboriginal artwork (Condition B52) due to the permeable design of the corten steel fence.</li> <li>The Department notes the approved landscaping strip along Bradleys Head Road will remain unchanged.</li> <li>The Department consulted with Council and Heritage Council of NSW, neither of whom raised any concern with the proposal.</li> <li>The Department notes due to the existing perimeter fence height on Bradley's Head Road the proposed 1.2 m corten steel fence would be less visible than the approved fence.</li> <li>The Department considers the revised fence design to be acceptable as it would reduce the visual impact of the fence and its impact on the streetscape.</li> <li>The Department also considers the removal of the requirement to incorporate Aboriginal artwork on the fence is acceptable, as it is permeable in nature and would not be visible from Bradley's Head Road.</li> <li>The Department therefore concludes the revised design of the fence along Bradleys Head Road is acceptable.</li> </ul>	<p>The Department recommends:</p> <ul style="list-style-type: none"> <li>Condition A2 is updated to reflect the revised design drawings</li> <li>Condition B52 be deleted.</li> </ul>



## 6 Evaluation

The Department has assessed the modification application and supporting information in accordance with the relevant requirements of the EP&A Act. The Department's assessment concludes that the proposed modification is appropriate on the basis that:

- it provides for upgraded animal facilities to meet current standards and the ongoing welfare of animals within the Upper Australian Precinct
- it would help reinforce Taronga Zoo as one of Sydney's premier tourist attractions through providing an improved experience for visitors
- the modified built form and fence design would not result in additional visual impacts from Sydney Harbour or the surrounding area
- the landscaping and species selection reflect the Australian landscape character of the site
- it provides for acceptable bushfire protection and management
- it would improve accessibility
- it would not remove any trees that have high retention value or heritage significance
- residual biodiversity impacts are acceptable due to additional biodiversity offsets (ecosystem and species credits).

The Department considers the modification is in the public interest and should be approved, subject to the recommended modified conditions of consent.

## 7 Recommendation

It is recommended that the Team Leader, Key Sites Assessments, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report
- **determines** that the application SSD 10456 MOD 1 falls within the scope of section 4.55(1A) of the EP&A Act
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to approve the modification
- **modify** the consent SSD 10456 MOD 1
- **signs** the attached approval of the modification (**Appendix C**).

**Recommended by:**



**Lucinda Craig**  
Planning Officer  
Key Sites Assessments

## 8 Determination

The recommendation is **Adopted / Not adopted** by:

A handwritten signature in blue ink, appearing to be 'CS', written over a faint blue rectangular stamp.

27/8/2021

**Cameron Sargent**

Team Leader

Key Sites Assessments

as delegate of the Minister for Planning and Public Spaces

# Appendices

## Appendix A – List of referenced documents

The following supporting documents and supporting information to this assessment report can be found on the Department of Planning, Industry and Environment's website as follows:

### **Modification Application and Response to Submissions**

<https://www.planningportal.nsw.gov.au/major-projects/project/41271>



## Appendix B – Statutory considerations

A consent authority may modify the consent if it is satisfied the proposed modification application meets the requirements of section 4.55(1A) of the EP&A Act. An assessment of the proposed modification application against the requirements of section 4.55(1A) of the EP&A Act is included in **Table 1**.

**Table 1** | Consideration of section 4.55(1A) of the EP&A Act

Section 4.55(1A)	Department's consideration
(a) The proposed modification is of minimal environmental impact	<b>Section 5</b> of this report provides an assessment of the impacts associated with the proposal. The Department is satisfied that the proposed modifications will have minimal environmental impacts.
(b) The development to which the consent as modified relates is substantially the same development as the development for which consent was originally granted and before that consent as originally granted was modified.	The development, as proposed to be modified, is substantially the same development as that originally approved in that: <ul style="list-style-type: none"> <li>the proposed use of the site remains the same</li> <li>the proposed modification to the approval will not significantly alter the built form or scale of the development</li> <li>it would not result in any additional unacceptable environmental impacts.</li> </ul>
(c) The application has been notified in accordance with the regulations.	The modification application has been notified in accordance with the regulations. Details of the notification are provided in <b>Section 4</b> of this report.
(d) Any submission made concerning the proposed modification has been considered.	The Department has considered submissions made, as addressed in <b>Section 4</b> and <b>Section 5</b> of this report.

Under section 4.55(3) of the EP&A Act, the consent authority must consider the matters referred to in section 4.15(1) of relevance to the development. **Table 2** identifies the matters for consideration under section 4.15(1) of the EP&A Act that apply to the proposed modification.

**Table 2** | Consideration of the matters listed under Section 4.15(1) of the EP&A Act

Section 4.15(1) Matters for consideration	Department's consideration
(a) the provisions of—	The modified proposal remains consistent with relevant environmental planning instruments.
(i) any environmental planning instrument	
(ii) any proposed instrument	Not applicable.
(iii) any development control plan	Under clause 11 of the SRD SEPP, Development Control Plans (DCPs) do not apply to SSD.
(iiia) any planning agreement	Not applicable.
(iv) the regulations	The application satisfactorily meets the relevant requirements of the Environmental Planning and Assessment Regulation 2000, including the procedures relating to applications (Part

6), the requirements for notification (Part 6, Division 6) and fees (Part 15, Division 1AA) (refer to **Section 4**).

(b) the likely impacts of that development including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	The Department considers the proposed changes to be minor and would not result in any adverse environmental impacts as addressed in <b>Section 5</b> .
(c) the suitability of the site for the development	The site remains suitable for the development.
(d) any submissions	The Department has considered submissions made, as addressed in <b>Section 4</b> and <b>Section 5</b> of this report.
(e) the public interest	The Department considers the modified proposal to be in the public interest as it would result in improved operational and amenity outcomes.

## Appendix C – Modification Instrument

The Modification Instrument can be found on the Department's website at:

<https://www.planningportal.nsw.gov.au/major-projects/project/41271>