

30 November 2021

218335

Kiersten Fishburn
Planning Secretary
Department of Planning, Industry and Environment
320 Pitt Street
Sydney NSW 2000

Attention: Sally Munk, Principal Planner Industry Assessments

Dear Sally,

SECTION 4.55(1A) MODIFICATION APPLICATION: SSD 7228 SYDNEY ZOO MODIFICATION 8

This application has been prepared by Ethos Urban on behalf of Sydney Zoo, pursuant to section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to modify State Significant Development 7228 (SSD 7228) relating to the Sydney Zoo, Bungarribee, in the Western Sydney Parklands (the site).

This modification relates to the permanent installation of a Ferris wheel in the north-eastern portion of the site. This design amendment is sought by Sydney Zoo, following the successful operation of a temporary Ferris wheel in 2020 as the zoo re-opened post-COVID. This minor design change is necessary to augment the operation of the zoo and provide for guests to obtain a unique viewing opportunity of the zoo site and broader Western Sydney Parklands.

This application identifies the consent, describes the proposed modification and provides an assessment of the relevant matters contained in section 4.55(1A) of the EP&A Act. This application is supported by the following documentation:

- Amended Plans prepared by Sydney Zoo (**Attachment A**);
- Ferris Wheel Design Drawings prepared by Technical Park (**Attachment B**);
- Visual Impact Assessment prepared by Ethos Urban (**Attachment C**).

1.0 Consent proposed to be modified

On 8 September 2017 the Planning Assessment Commission (PAC) approved the SSD 7228 for the construction and operation of a zoological facility within the Western Sydney Parklands, the Sydney Zoo. The development provides a new recreational facility for Western Sydney which opened to the public on 6 December 2019.

The development comprises a zoological facility containing animal exhibits and associated infrastructure over the site, being a total area of approximately 16.5ha, for the following key components:

- Animal exhibits across several enclosures of varying design for a range of native and exotic animals;
- Back-of-house buildings for exhibits;
- Main entrance building comprising entry/exit, and gift shop;
- Restaurant and café, kiosks and amenities;
- Educational show arena;
- Picnic areas and gardens;
- Wetlands and waterways;

- Service building containing administration areas; curatorial and food preparation areas; and veterinarian space;
- Service yard with maintenance shelter;
- Internal services and utilities to support the zoo, including water, sewer, electricity and telecommunications;
- Car parking for approximately 1,053 vehicles, bus and coach parking; and
- Wayfinding signage and landscaping of the site associated with all of the above.

A number of modifications have been lodged and approved by the Department of Planning, Industry and Environment (DPIE) since the consent was issued and as a result of design development refinement:

- Modification 1 sought to provide for design refinement based on the operational needs of the zoo and after consultation with the Department of Primary Industries (Exhibited Animals) in relation to improving animal welfare, handling and management. The modification provided for the reconfiguration of exhibits, buildings and back-of-house facilities within the zoo site and was approved by the Department on 8 May 2018.
- Modification 2 related to the reconfiguration of the aquatic habitat, realignment of the boardwalk access path and amendments to the Landscape Masterplan. MOD 2 was approved on 20 September 2018.
- Modification 3 relates changes to the hours of operation and was lodged on 4 December 2018. The application was approved on 25 November 2019;
- Modification 4 related to the addition of new back of house sheds and was approved on 4 July 2019;
- Modification 5 proposed amendments to conditions, however this application was withdrawn;
- Modification 6 proposed design changes to the Farm Experience exhibit, and was approved on 3 June 2020; and
- Modification 7 proposed to extend the operating hours of the zoo, and was approved on 28 June 2021.

This application represents the eighth modification application to date, and if approved would represent the eighth modification of the approved development.

2.0 Proposed modifications to the consent

This application seeks approval under Section 4.55(1A) of the EP&A Act to modify the approved SSD to provide a refined design based on operational needs of the zoo. Amended Architectural Drawings are included at **Attachment A** and design drawings for the proposed Ferris wheel are included at **Attachment B**.

2.1 Modifications to the Development

This modification relates to the permanent installation of a Ferris wheel in the north-eastern portion of the site as an additional guest experience. This design amendment is sought by Sydney Zoo, following the successful operation of a temporary Ferris wheel in 2020 as the zoo re-opened post-COVID (having been shut from April 2020 until September 2020, with another shutdown occurring from June 2021 until October 2021 due to Government Health Restrictions). The temporary Ferris wheel utilised on-site in 2020 is the same wheel that is now proposed to be permanently installed.

2.1.1 Proposed location of the Ferris wheel

The permanent Ferris wheel will be located in the north-eastern portion of the site adjacent to the main food outlet for the zoo and the baboon enclosure. This vacant grass area previously accommodated the temporary Ferris wheel in 2020. The permanent Ferris wheel has been sited at this location to optimise views across the zoo. In addition, the Ferris wheel site is advantageous with respect to access, being adjacent to a direct path from the main entry to the zoo, and surrounded by the main recreational and amenities area of the zoo comprising the restaurant, picnic and children's playground area. The proposed location of the Ferris wheel is shown in **Figure 1** to **Figure 3**.

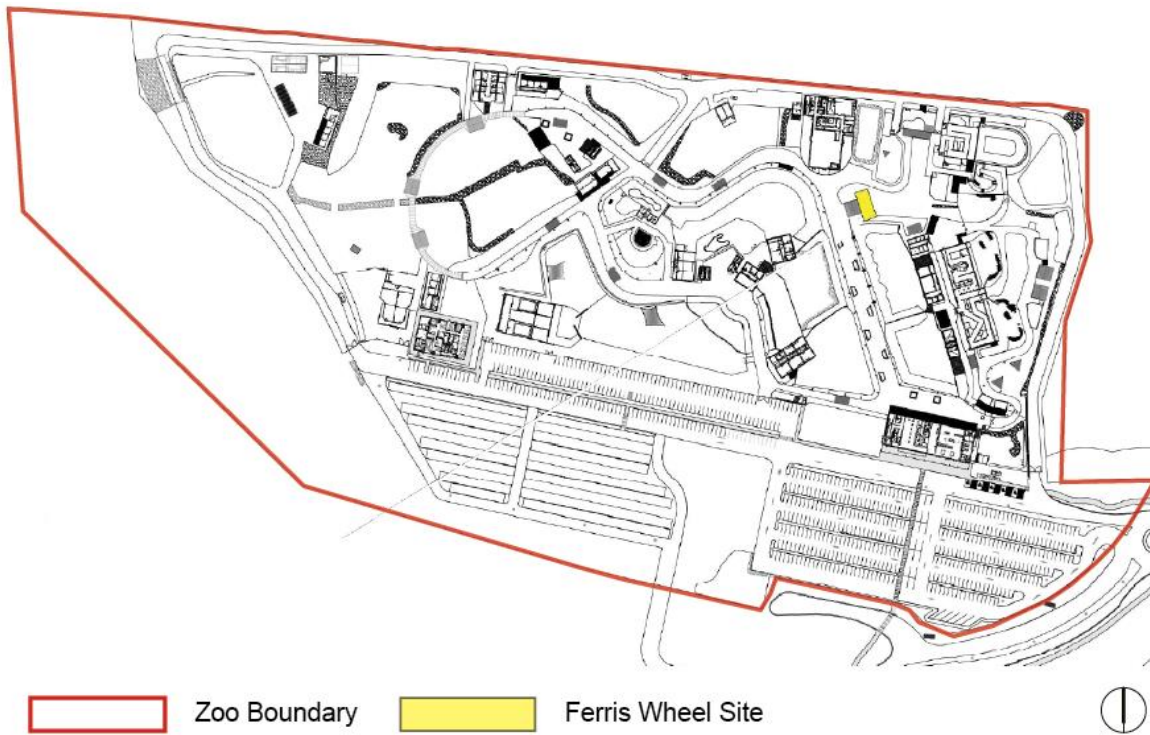


Figure 1 Proposed location within Western Sydney Zoo

Source: Sydney Zoo / Ethos Urban

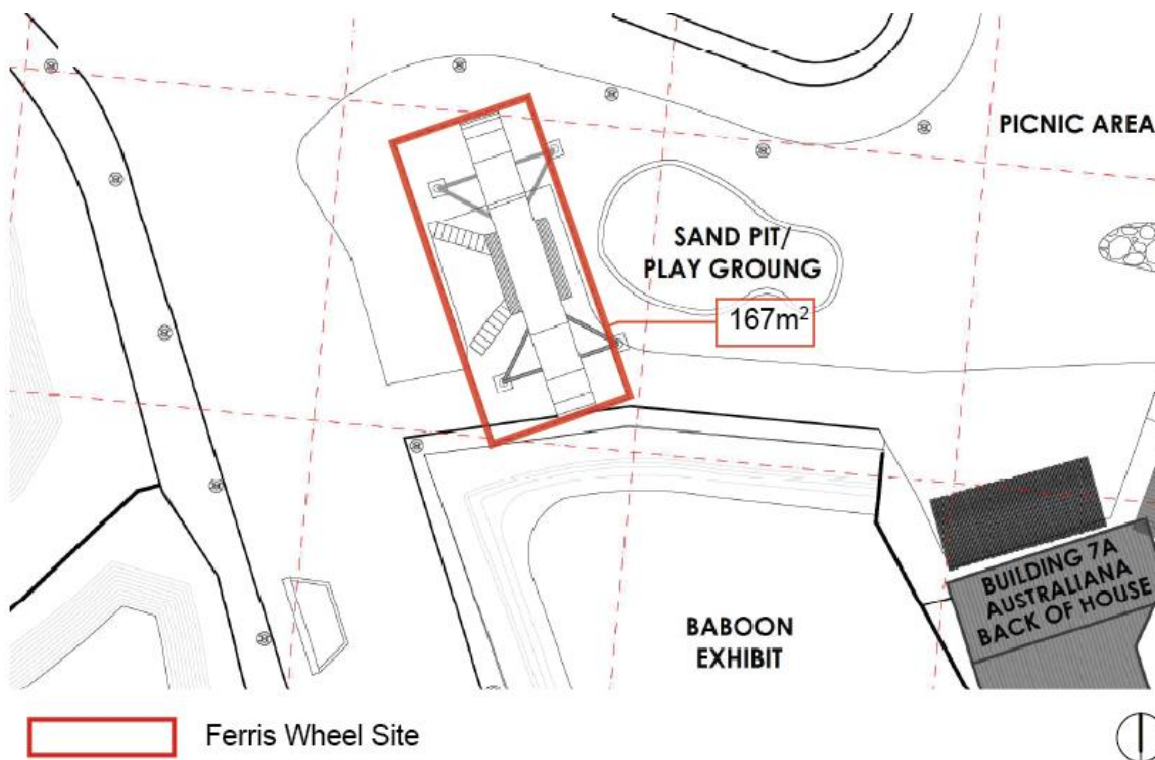


Figure 2 Proposed Ferris wheel site

Source: Sydney Zoo / Ethos Urban



Figure 3 Aerial render of proposed Ferris wheel site

Source: Sydney Zoo

2.1.2 Proposed design of the Ferris wheel

The proposed Ferris wheel is 22 metres in height, with capacity 32 guests in 16 cars. The Ferris wheel adopts a prefabricated design that consists of the following components:

- Steel frame with a diameter of approximately 19m, which will be secured to the ground 4 wooden supports;
- Ground level support platform, 2.55m in width and 15.2m in length; and
- 16 cars measuring 1.59m x 1.8m x 2.35m, each able to accommodate two visitors.

These design components are manufactured off-site and will be transported to the zoo by a large truck. Assemblage of the Ferris wheel will occur on-site, with direct vehicle access to the site of the Ferris wheel provided via the adjacent path, which is over 10m in width.

Design drawings for the Ferris wheel are included at **Attachment B**. Overview drawings and renders of the proposed Ferris wheel are provided at **Figure 4** to **Figure 6** over page.

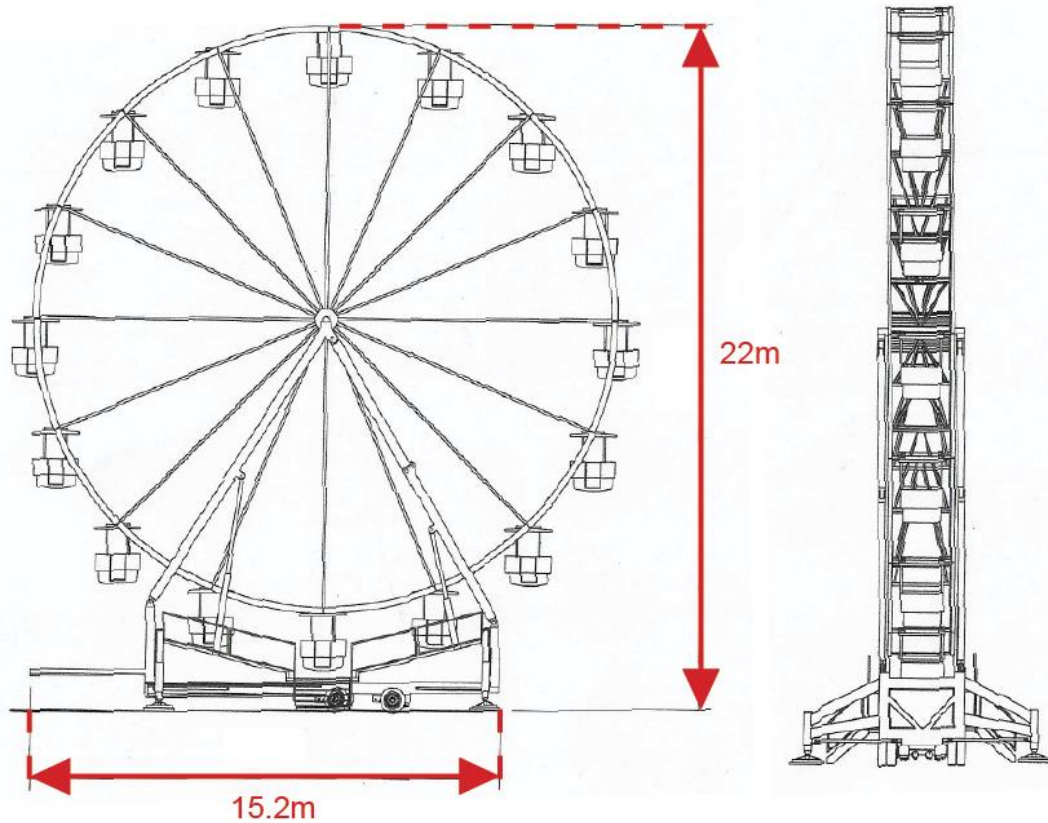


Figure 4 2D design overview drawings of the proposed Ferris wheel
Source: Technical Park

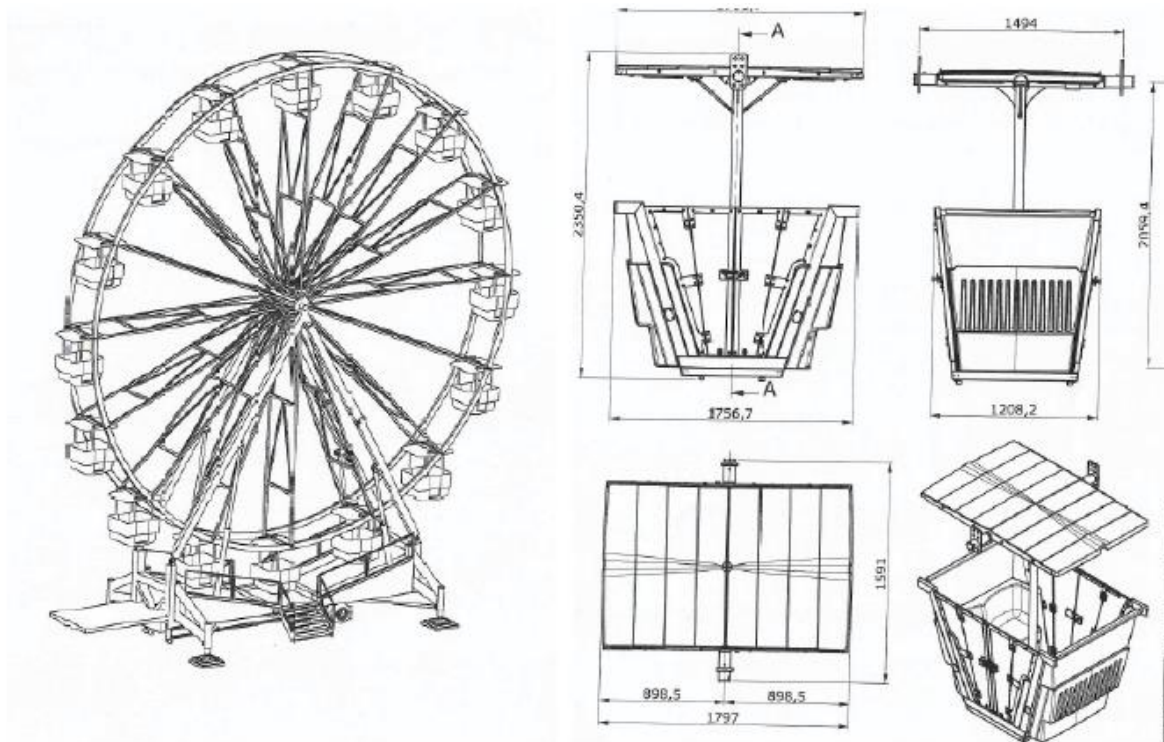


Figure 5 3D design overview drawings of the proposed Ferris wheel (left) and cars (right)
Source: Technical Park



Figure 6 Day renderings of the proposed Ferris wheel

Source: Sydney Zoo

2.1.3 Operation

The Ferris wheel is proposed to operate during regular zoo hours, with the exception of temporary events, during which it may operate with lighting at night. Operational details for the proposed Ferris wheel are listed as follows:

- **Ticketing:** The Ferris wheel will only be available to paying Sydney Zoo visitors, but may be a separately ticketed ride that will require an additional payment from zoo visitors. There may be periods and events where the requirement to purchase a ticket is waived at the Zoo's discretion.
- **Operation:** The Ferris wheel will generally operate during daylight hours within the normal hours of operation for the zoo, as prescribed by Condition B10 of the existing approval. Night operation is proposed for temporary events, as detailed below.
- **Temporary events:** The Ferris wheel will operate at night during occasional temporary events that may be hosted on site in accordance with Conditions B10, B10A, C5D and C32C of the existing approval, unless otherwise approved in writing by the relevant consent authority. The Ferris wheel will not operate after 11pm during temporary events, unless approved in writing by the relevant consent authority.
- **Noise:** Noise generated by the operation of the Ferris wheel will not exceed the noise limits specified in Table 3 of Condition C32 under the existing approval.

2.1.4 Lighting

The proposed Ferris wheel will have lighting fixed to the steel frame for the purpose of generating visual interest during temporary events that may be hosted on site in the evening. The proposed lighting will achieve consistency with AS 4282 (INT) - *Control of Obtrusive Effects of Outdoor Lighting*, as required by Condition C47 of the existing approval.

The Ferris wheel will operate with the proposed lighting turned on during occasional temporary events, which will end no later than 11:00pm and must be hosted on site accordance with Conditions B10, B10A, C5D and C32C of the existing approval. The proposed lighting will be shut off during daylight hours and/or when the Ferris wheel is not operating, unless approved in writing by the relevant consent authority.

The proposed lighting will further enhance the experience of attending an event at the zoo, and is therefore considered necessary to promote Western Sydney Zoo as a high-quality tourist attraction of regional significance.

2.2 Modifications to conditions

The proposed modifications described above necessitate amendments to the consent conditions which are identified below. Words proposed to be deleted are shown in ~~bold strike through~~ and words to be inserted are shown in **bold italics**.

In the definitions insert:

MOD8 *The development as described in modification application SSD 7228 MOD 8, the supporting documentation submitted with SSD 7228 MOD 8, the conditions of this Consent and Appendix A of this Consent.*

Condition B2. *The Applicant shall carry out the Development in accordance with the:*

- EIS, RTS, Supplementary Information and Additional Information;*
- Development layout plans and drawings in the EIS, RTS, and Supplementary Information;*
- The Management and Mitigation Measures (see Appendix B);*
- The modification application SSD 7228 MOD 1 and supporting documentation; and*
- The modification application SSD 7228 MOD 2 and supporting documentation;*
- The modification application SSD 7228 MOD 3 and supporting documentation;*
- The modification application SSD 7228 MOD 4 and supporting documentation;*
- The modification application SSD 7228 MOD 6 and supporting documentation;*
- The modification application SSD 7228 MOD 7 and supporting documentation; and*

(j) The modification application SSD 7228 MOD 8 and supporting documentation.

Reason: The proposed modification seeks to update Condition B2 to adequately reflect the modified plans. No change is proposed to Condition B10 of the existing approval.

2.3 Consultation

Sydney Zoo has consulted with the Western Sydney Parklands Authority, who are supportive of the Ferris wheel and have provided their landowner's consent for the modification application. No further consultation has been carried out with any other stakeholder or agency. It is highlighted that the temporary Ferris wheel has previously been in operation for approximately 6 months through 2020 (and was also illuminated at night during the temporary installation) and has not raised any concerns or complaints from council, the community or any other stakeholder.

3.0 Substantially the same development

Section 4.55(1A) of the EP&A Act states that a consent authority may modify a development consent if "*it is satisfied that the development to which the consent as modified relates is substantially the same development as the development for which the consent was originally granted and before that consent as originally granted was modified (if at all)*".

The Sydney Zoo was approved by the PAC as a zoological facility, and is characterised as a recreational facility, given that the Western Sydney Parklands Plan of Management identifies that the Bungarribee Precinct has capacity to be significantly improved to become an important recreational and tourism hub, providing additional regional recreation, tourism, social and cultural opportunities for Western Sydney and specifically identifies the Sydney Zoo site for a tourism facility. Importantly, as noted in the original EIS and RTS as submitted for SSDS 7228 and as part of the 'development' approved in the consent, the zoo is an operating recreational facility for Western Sydney, as part of a range of tourist and recreational attractions near to the site, including:

- Featherdale Wildlife Park;
- Calmsley Hill City Farm;
- Sydney Motorsport Park;
- Blacktown International Sports Park;
- Raging Waters Sydney; and
- West HQ.

Furthermore, the Western Sydney Parklands SEPP which applies to the site aims to allow a diverse range of recreational, entertainment and tourist facilities in the Western Sydney Parklands – of which the Sydney Zoo is one such recreation facility. Noting that there is no land use definition for a 'tourist facility' or a 'tourism facility' the zoo is therefore a type of 'recreational facility'. Adding in an additional attraction therefore does not change the land use of the site which remains consistent with the approved consent and underlying objectives for the land under the Western Sydney Parklands SEPP and Western Sydney Parklands Plan of Management.

In order to be considered substantially the same development as the existing approved development, a comparative assessment is required between the development as originally approved and the development as it is proposed to be modified (by the inclusion of the proposed Ferris wheel. This analysis is outlined in **Table 1**.

Table 1 Comparative analysis

| Test | Analysis |
|---|--|
| <p>The assessment requires comparison of the development as originally approved and the development as proposed to be developed.</p> | <p>Except for some minor view impacts when considered in the context of the fully developed Sydney Zoo and the surrounding Bungarribee Super Park, the Ferris wheel is minor addition to the Sydney Zoo landscape and the range of recreational activities provided at Sydney Zoo. The Ferris wheel will provide a new and different way of experiencing and observing animals and landscapes – in much the same way as a new exhibit provides a different perspective on an animal or landscape – such as the dark room for marsupials/insects and reptiles, the elevated boardwalk for the African Savannah, and the aquarium for fish.</p> |
| <p>The comparative task does not merely involve a comparison of the physical features or components of the development as currently approved and modified where that comparative exercise is undertaken in some type of sterile vacuum.</p> | <p>Contextually, the site is located within the Bungarribee Super Park, which is intended to be a major tourist and recreation destination. The addition of an additional attraction (e.g., a Ferris wheel) within this context is not remarkable and does not alter the nature of the Sydney Zoo development or its interaction with the surrounding Bungarribee Super Park precinct.</p> |
| <p>The comparative task requires a qualitative as well as quantitative appreciation of the differences.</p> | <p>From a quantitative perspective the Ferris wheel is trivial – affecting 0.1% of the site area. It will introduce a new visible structure into the landscape, however given the breadth and extent of Sydney Zoo and the range of highly visible structures associated with the zoo, the Ferris wheel is a minor addition to the skyline with respect to the existing approved built form on site.</p> <p>The tallest structure at the zoo is the ‘O Line Post’, which has a height of 12.5m, while the tallest building at the zoo is the Spantec Building which is 8.5m high. Given the height of the Ferris wheel, void areas between each of its structural components, and broader built form of the existing zoo itself, the proposal is not considered to render any material change to approved impacts with respect to with respect to visual dominance, overshadowing, visual amenity, and the overall character of Sydney Zoo.</p> <p>The Ferris wheel has no bearing on the operational capacity of Sydney Zoo, or the number of car parking spaces required, or the operating hours currently applicable to the site.</p> |
| <p>The comparative task needs to be undertaken in context (including the circumstances in which the development consent was granted).</p> | <p>Relevant to the context of the comparative task is the characterisation of the land use. A key issue of the assessment of the EIS for the zoo was the socio-economic impact of the Sydney Zoo as a major recreational facility on similar facilities in western Sydney – from both a beneficial and negative perspective. Relevant land uses identified in relation to this context are a range of recreational and tourism related facilities. Sydney Zoo was clearly assessed as a recreational facility, so the addition of a recreational attraction is neither a change in land use or a major change to the nature of the development as originally approved.</p> |
| <p>The comparative task needs to assess the physical features that are changed, but also the environmental implications of the changes.</p> | <p>The Ferris wheel will be visible from some publicly accessible locations, however the view impact assessment clearly demonstrates that the Ferris wheel is not highly visible, and it will not dominate the skyline of Sydney Zoo – as such, it is not a major physical change. Further no publicly visible existing fabric of Sydney Zoo will be removed.</p> <p>The Ferris wheel will not contribute any additional environmental impacts. The only matter that is beyond trivial is the potential visible impacts, and the visual impact assessment demonstrates that the Ferris wheel will be barely visible from most vantage points – including from the Great Western Highway, and will have a low impact.</p> |
| <p>While the comparative task involves comparison of the whole of the development, this should not diminish a feature of the development that is important, material or essential.</p> | <p>The Ferris wheel would not result in the removal of any feature of Sydney Zoo that is important, material or essential. Whilst important from a commercial and experience perspective, the addition of the Ferris wheel is not substantially different from the current experiences provided at Sydney Zoo – namely an opportunity to view animals and landscapes in new and different ways. In this sense, it is like a new exhibit that provides a different perspective on an animal or landscape – such as the dark room for marsupials/insects and reptiles, the elevated boardwalk for the African Savannah, and the aquarium for fish.</p> |

3.1.1 Summary

The development, as proposed to be modified, is therefore substantially the same development as that originally approved in that:

- the proposed modification does not alter the key components of the approved development description;
- the proposed amendment does not seek to amend the approved land use;
- the proposed change does not affect the overall footprint of the development, or its interaction with the public domain and urban design;
- there are no changes to car parking areas, access arrangements or the vehicular/pedestrian circulation paths;
- there are no changes to the overall capacity of the development in regard to staff numbers or visitors;
- the proposed modifications are internal to the Zoo, with no significant changes proposed in relation to sensitive views from the public domain (refer to **Section 4.3**);
- the proposed Ferris wheel is a reasonably anticipated addition to the mix of attractions at Sydney Zoo, noting similar ancillary attractions in zoos and wildlife parks across Australia (refer to **Section 4.5.1**);
- the Ferris wheel is an ancillary, additional guest experience for visitors to Sydney Zoo, providing for a unique viewing experience of the zoo grounds and broader Western Sydney Parklands;
- the Ferris wheel does not modify the conservation and zoological features and activities undertaken by the Zoo, and continues to provide a community benefit through broadening the experience provided by the facility;
- the environmental impacts of the modified development remain the same as the approved development; and
- the proposed modification is consistent with the Western Sydney Parklands Plan of Management which identifies Bungarribee Super Park as suitable for a tourist and commercial hub, of which Sydney Zoo, being a tourist attraction, continues to comply.

For these reasons, the Department can be satisfied that the modified proposal is substantially the same development for which consent was originally granted.

4.0 Environmental assessment

Section 4.55(1A) of the EP&A Act states that a consent authority may modify a development consent if “*it is satisfied that the proposed modification is of minimal environmental impact*”. Under section 4.55(3) the consent Authority must also take into consideration the relevant matters to the application referred to in section 4.15(1) of the EP&A Act and the reasons given by the consent authority for the grant of the original consent.

The following assessment considers the relevant matters under section 4.15(1) and demonstrates that the development, as proposed to be modified, will be of minimal environmental impact. In particular, the proposed modifications will not create any additional environmental impacts beyond those already considered by the Department as part of the original assessment of SSD 7228 with regard to the following:

- Air and odour;
- Noise;
- Traffic, parking and access;
- Aboriginal Heritage;
- Landscaping
- Built form;
- Visual impact;

- Social and economic impacts;
- Vegetation and biodiversity;
- Waste management
- Bushfire management;
- Hazards and risk;
- Ecologically sustainable development; and
- Infrastructure and servicing.

4.1 Compliance with Legislation, Environmental Planning Instruments and Strategies

The proposed modifications do not alter the approved development's compliance with the statutory and strategic plans including:

- *Environmental Protection and Biodiversity Conservation Act 1999;*
- *Environmental Planning and Assessment Act 1979;*
- *Exhibited Animals Protection Act 1986;*
- *Roads Act 1993;*
- *Biodiversity Conservation Act 2016;*
- *Contaminated Land Management Act 1997;*
- *Biosecurity Act 2015;*
- *State Environmental Planning Policy (Western Sydney Parklands) 2009;*
- *State Environmental Planning Policy (State and Regional Development) 2011;*
- *State Environmental Planning Policy (Infrastructure) 2007;*
- *State Environmental Planning Policy No 64 – Advertising and Signage;*
- *State Environmental Planning Policy No 55 – Remediation of Land;*
- *State Environmental Planning Policy No 33 – Hazardous and Offensive Development;*
- NSW Biosecurity Strategy 2013-2021;
- NSW State Plan 2021;
- A Metropolis of Three Cities and Western City District Plan; and
- Western Sydney Parklands Plan of Management 2020.

It is also noted that the Ferris wheel is an 'amusement device' as defined under the Work Health and Safety Regulation 2017 (WHS Regulation), and subject to requirements set out in Chapter 5 of the WHS Regulation. The requirements ensure that the Ferris wheel is installed and operated in a safe and secure manner, and places obligations on the manufacturer of the device, the supplier of the device the installer of the device and the operator of the device – which specifically requires that the person with management control of the device must ensure there are no risks to health and safety arising from its installation. Further, the device is registered in accordance with Part 5.3 of the WHS Regulation, and is therefore subject to the specific control measures for amusement devices set out in Section 238-242 of the WHS Regulation, which include requirements in relation to the operation of the device, as well as in relation to maintenance, inspection and testing of the device.

With consideration of these work health and safety requirements that apply to the Ferris wheel, it is considered that the Ferris wheel is not a building or structure for the purposes of the National Construction Code (formerly the Building Code of Australia), and therefore Condition B16 of the consent does not apply to the Ferris wheel.

4.2 Built Form

The proposed Ferris wheel will occupy an area of 167m² in the north-eastern portion of the zoo grounds. The proposal is not considered to be discordant with the desired character of the Western Sydney Parklands and surrounding locality.

Impacts attributed to the modified built form will be negligible, given the scale of the Ferris wheel in comparison to the broader built form of the existing zoo itself. The tallest structure at the zoo is the 'O Line Post' within the chimpanzee enclosure, which has a height of 12.5m. The proposed skyline across the zoo is shown in **Figure 7**, whilst an image of the 'O Line Post' in relation to the Ferris wheel is provided at **Figure 10** over page.

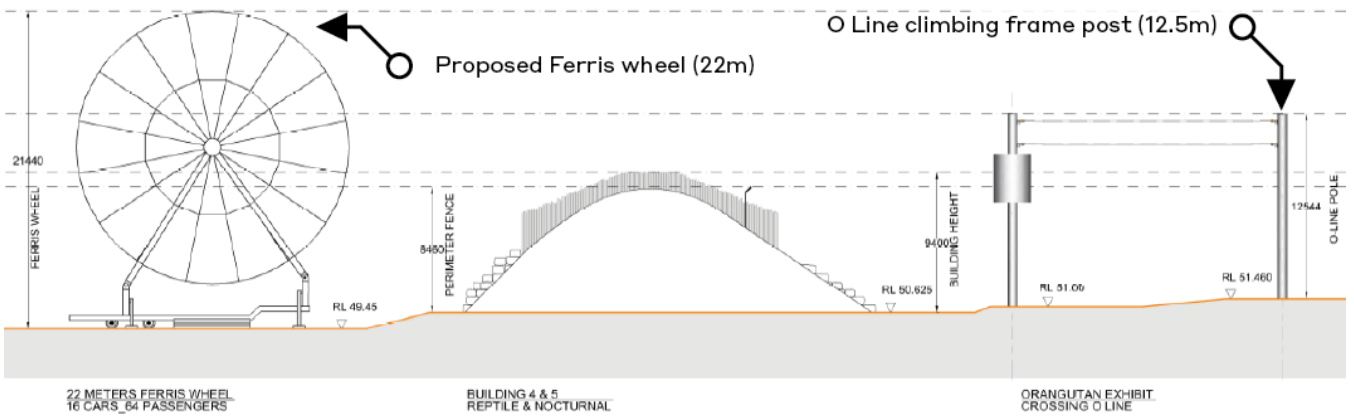


Figure 7 Proposed skyline across Western Sydney Zoo

Source: Sydney Zoo

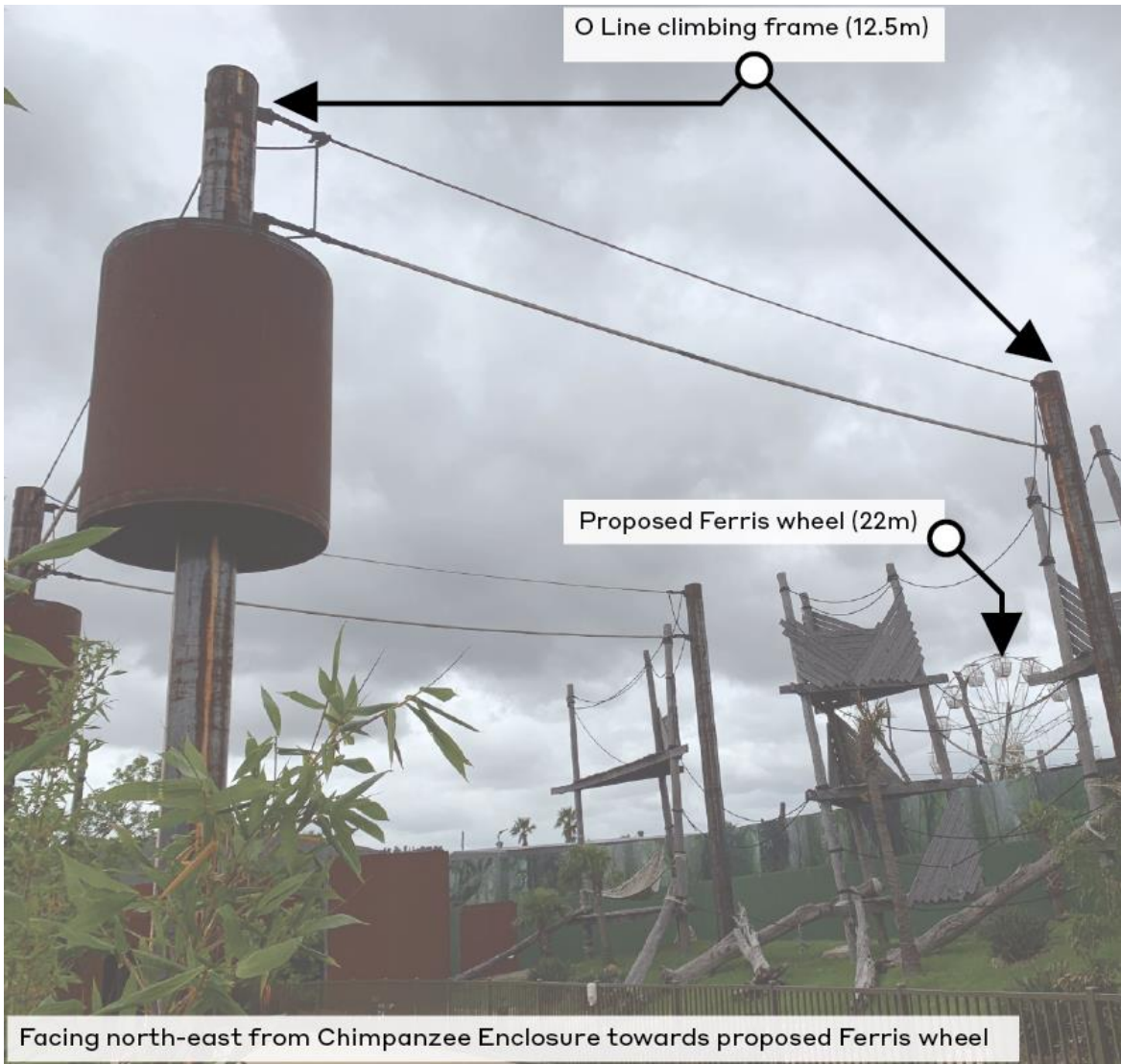


Figure 8 Render of proposed Ferris wheel in relation to 'O Line' post from Chimpanzee Enclosure

Source: Sydney Zoo

Given the height of the Ferris wheel, void areas between each of its structural components, and surrounding built form, the proposal is not considered to render any material change to approved impacts with respect visual dominance, over shadowing and the overall character of the zoo or surrounding parklands.

In addition, the proposed change to the overall approved built form will be imperceptible when viewed from the public domain, including the Western Sydney Parklands (refer to **Section 4.3** over page).

4.3 Visual Impact

A Visual Impact Assessment (VIA) has been undertaken (**Attachment C**) to assess the impacts of the proposed permanent installation of the Ferris wheel at the site.

The original landscape character and intention for the Sydney Zoo was for it to integrate into the existing environment through the use of landscaping and architectural design, reflecting the future desired built form of the wider Bungarribee Precinct under the Western Sydney Parklands Plan of Management. As part of the original Environmental Impact Assessment for SSD 7228, it was determined that the landscape and visual impacts from the built form of the Zoo, being a newly introduced element into the landscape, would be moderate. The introduction of

the Ferris wheel, therefore, would be in addition to the existing built form of the zoo. It is also noted that the consent does not specify any limitation on visual amenity, outside of Conditions C45, C46 and C47 relating to landscape maintenance, signage and lighting.

The proposed modification will not create any significant additional environmental impacts beyond those already considered by the Department as part of the original assessment of SSD 7228, including visual impacts. This is confirmed by the Visual Impact Assessment (VIA), which is included at **Attachment C**.

The location and direction of 'Key View' photographs in the VIA is shown in **Figure 9** below. These 'Key Views' are summarised in **Figure 10** over page.

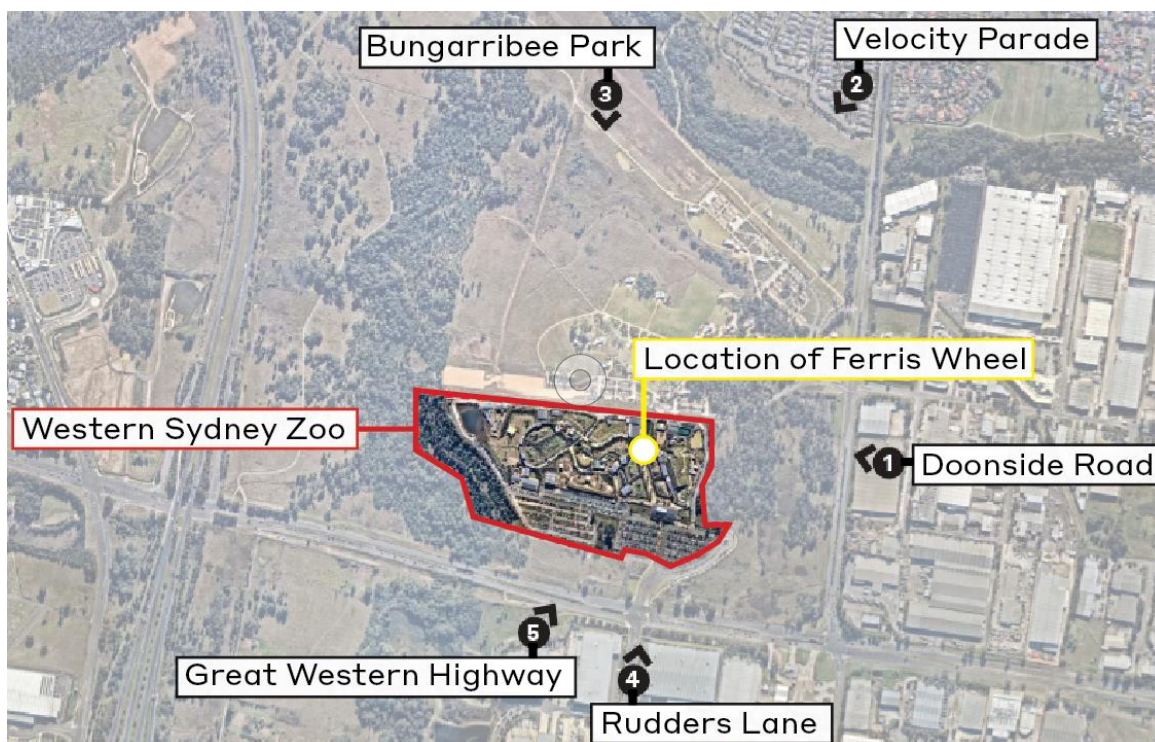


Figure 9 Key View locations

Source: Ethos Urban / Nearmap









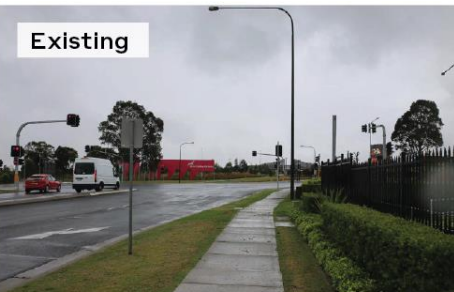



| Viewpoint | Map Ref <i>Refer to Figure 7</i> | Image Extract <i>Refer to Section 3.0 of the VIA included at Attachment C</i> | |
|---|---|--|---|
| Viewpoint 1 Doonside Road |  | Existing  | Proposed  |
| Viewpoint 2 Velocity Parade |  | Existing  | Proposed  |
| Viewpoint 3 Bungarrabee Park |  | Existing  | Proposed  |
| Viewpoint 4 Rudders Lane |  | Existing  | Proposed  |
| Viewpoint 5 Great Western Highway |  | Existing  | Proposed  |

Figure 10 Key views summary graphic

Source: Ethos Urban

4.3.1 Visual impact summary

The VIA concluded that the proposal would have a low visual impact, as:

- The proposal does not have negative effects on features which are associated with high visual significance or scenic quality within the primary visual catchment area;
- The proposed Ferris wheel structure sits well with the other built forms in Sydney Zoo and blends in with the native trees in the Western Sydney Parkland;
- The proposal does not decrease the presence or conflict with existing visual character of landscape, built form, building scale and urban fabric;
- The presence of proposed Ferris wheel in the vast Western Sydney Parkland is dwarfed in comparison with native trees at a much greater height which act as environmental buffer to the nearest residential area; and
- The proposal will be inconsequential with respect to the desired preservation of significant views and vistas, noting there will be no view loss of blocking.

4.4 Lighting impacts

As detailed in **Section 2.1.4**, the proposed Ferris wheel will have lighting fixed to its steel framing with the principal purpose of generating visual interest during temporary events. The proposed lighting will comply with *AS 4282 (INT) - Control of Obtrusive Effects of Outdoor Lighting*, as required by Condition C47 of the existing approval.

The Ferris wheel will operate on occasion at night for temporary events, during which the lighting on the Ferris wheel may be turned on (noting the temporary Ferris wheel as operated during 2020 was illuminated at night). The proposed lighting will not be turned on during daylight hours and will be turned off when the Ferris wheel is not in use.

Whilst the proposed lighting may be illuminated for temporary events, it will be shut off at 11pm when temporary events are required to end under Condition B10 of the existing approval, unless approved in writing by the relevant consent authority. In addition, it is noted that the frequency of temporary events is limited to a maximum of eight events per calendar year under Condition B10A, until such time Conditions C32C and C5D are met. Lighting impacts, albeit negligible, will be confined to temporary periods of short duration. The scope for any substantial impact attributed to the proposed lighting, including 'sky glow' or light pollution, is therefore extremely limited.

In addition, the proposed Ferris wheel is located within the Western Sydney Parklands. Native trees across the surrounding parkland will dwarf the Ferris wheel and act as an environmental buffer between surrounding residential areas. This further mitigates the potential for light spillage and glare impacts. Given the location of the Ferris wheel and occasional use of the proposed lighting, any nuisance impacts will be negligible.

Further to this, the proposed lighting will not be a distraction to motorists on surrounding roads, including the Great Western Highway, M7, and Doonside Road. As stated, the proposed Ferris wheel is obscured by trees across the Western Sydney Parklands, such that direct sight lines from surrounding roads towards the Ferris wheel are obstructed. The Ferris wheel is also located approximately 320m away from the Great Western Highway. Considering also the temporary and periodic use of the proposed lighting, and significant distance separating motorists from the Ferris wheel, potential distractions to motorists are considered to be negligible.

Night viewpoints of the proposed Ferris wheel when illuminated are shown and summarised at **Figure 11** and **Figure 12** over page. These viewpoints further demonstrate that:

- The location of the permanent Ferris wheel within the zoo and broader Western Sydney Parklands is key to the successful mitigation of potential lighting impacts achieved by this design modification. In this regard, the Ferris wheel would be located approximately 320m away from the Great Western Highway, 400m away from Doonside Road and almost 800m away from the closest residents at Bungarribee.

- The proposed lighting will be obscured by canopy trees across the Western Sydney Parklands, such that it will not be visually prominent when viewed from surrounding roads, including the Great Western Highway, Rudders Street, and Doonside Road. This is shown in Viewpoints 1, 3, 4 and 5 over page.
- Trees to the immediate north provide a barrier between the site and residential development, such that the proposed lighting will be inconsequential with respect to residential amenity, as shown in Viewpoint 2 at Velocity Parade.



Figure 11 Night Viewpoint Locations

Source: Sydney Zoo

| Viewpoint | Map Ref <i>Refer to Figure 9</i> | Night Viewpoint Image <i>Source: Sydney Zoo</i> |
|---|---|--|
| <p>Viewpoint 1 Doonside Rd near Bungarrlbee Park entrance</p> |  |  |
| <p>Viewpoint 2 Velocity Parade</p> |  |  |
| <p>Viewpoint 3 Doonside Rd near Steeltrap Drive Intersection</p> |  |  |
| <p>Viewpoint 4 Rudders Street</p> |  |  |
| <p>Viewpoint 5 Great Western Highway</p> |  |  |

Figure 12 Night views summary graphic

Source: Ethos Urban / Sydney Zoo

4.5 Social and Economic Impacts

The proposed Ferris wheel will diversify the mix of attractions available at Sydney Zoo, as required to ensure the zoo remains competitive as a high-quality regional tourist attraction, while ensuring recovery from COVID-19 is appropriate for both the Zoo plus also the community who attend the zoo as a guest, providing an additional experience when in attendance. The zoo has become a destination of choice contributing to the economic growth of Western Sydney, and refreshing the offerings provided on-site ensures a constantly evolving experience for guests who visit the site. This is particularly important to ensure patronage numbers remain high to provide for the funding required by the Zoo to ensure continuation of the ongoing community benefits and activities operated by the Zoo, including but not limited to:

- The Sydney Zoo Foundation, providing for long-term conservation and recovery programs;
- Educational programs including Bungarrabee Dreaming;
- Continuing involvement in RunWest;
- Community food festival and community group visitation days; and
- World's Biggest Playgroup.

4.5.1 Similar attractions at other major zoos in Australia

The proposed Ferris wheel is a reasonably anticipated addition to the mix of attractions at Western Sydney Zoo. A number of other Australian zoos and wildlife parks are diversifying their offering through the inclusion of ancillary attractions, including carousels, splash playgrounds, high rope courses, gondolas and miniature train circuits.

The Ferris wheel is considered appropriate in context to Sydney Zoo and the mix of attractions available at other major tourist facilities, including:

- Oakvale Wildlife Park, including the Splash Bay Water Park as an ancillary water activity area;
- Symbio Wildlife Park, including the Symbio Splash Park as an ancillary water activity area;
- Taronga Zoo, including the Sky Safari cable car which provides for additional views over Sydney Harbour and the zoo grounds;
- Melbourne Zoo (Victoria), including the carousel as an ancillary offering;
- Perth Zoo (Western Australia), including a carousel as an ancillary offering;
- Currumbin Wildlife Sanctuary (Queensland), with the Tree Tops High Ropes challenge as an ancillary offering; and
- Australia Zoo (Queensland), with the Splash Zone as an ancillary water activity area.

The variety of ancillary uses associated with these other wildlife parks and zoos indicates that the proposed addition of the Ferris wheel is an appropriate additional offering suitable for the Sydney Zoo.

4.6 Site Suitability and Public Interest

The site remains suitable for the proposed development and will continue to provide a catalyst for tourism and recreation in Western Sydney. Further to this, the proposed modification is consistent with the Western Sydney Parklands Plan of Management which identifies Bungarrabee Super Park as suitable for a tourist and commercial hub. The Sydney Zoo clearly satisfies and complies with the Plan of Management, being a tourist attractor for Western Sydney.

In addition, the proposed design modification will diversify the mix of attractions offered at the zoo, ensuring an exciting visitor experience. The proposed modification is therefore considered suitable in context to the site, and in the public interest particularly as it will allow Sydney Zoo to continue to drive the recovery of Western Sydney from the COVID-19 pandemic while delivering on its numerous community and public benefits.

5.0 Conclusion

The proposed modification relates to the permanent installation of a Ferris wheel at Sydney Zoo. The modification does not result in any change to fundamental aspects of the approved development such as overall development area, approved land uses, or the capacity of the zoo.

The design modification does not alter the environmental assessment completed as part of the original SSD 7228 application and is necessary to ensure the zoo remains as a high-quality regional tourist attraction, noting that all tourist facilities are continually updating visitor offerings. This will allow the zoo to continue providing a catalyst for tourism and recreation in Western Sydney.

In accordance with section 4.55(1A) of the EP&A Act, the Minister may modify the consent as:

- the proposed modification is of minimal environmental impact;
- the proposed modification is consistent with the Western Sydney Parklands Plan of Management; and
- The proposed Ferris wheel is a reasonably anticipated addition to the mix of attractions at Sydney Zoo, noting the installation of similar ancillary attractions other major tourist attractions.

We trust that this information is sufficient to enable a prompt assessment of the proposed modification request.

Yours sincerely,



Oscar Davie
Junior Urbanist
04 1445 0331
odavie@ethosurban.com



Christopher Curtis
Principal
02 9956 6962
ccurtis@ethosurban.com