

# urban design report

2-4 tench avenue, jamisontown



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urban design report v2.1

by environa studio

for Winter Sports World Pty Ltd

September 2018

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## 1.0 introduction + methodology

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## introduction

This Urban Design Report reviews a proposal for a "Winter Sports World" (WSW) in Tench Avenue and Jamison Road, Jamisontown in Penrith LGA, which is a complex that provides a year-round experience for a variety of winter sports activities, for both locals and tourists, particularly those planning a trip west to the Blue Mountains, together with associated facilities including a 4-5 star Hotel with Conference, food and beverage facilities.

The subject site comprises a 2.34 ha allotment located at 2 Tench Avenue, Jamisontown in the Penrith local government area (LGA). It is currently zoned SP3 – Tourist and falls within the broader Riverlink Precinct under the Penrith Development Control Plan 2014.

The vision for the Riverlink Precinct is an area comprising a mix of activity nodes, with a diverse range of land uses and services, and a strong focus on entertainment and leisure.

The Precinct already contains various tourism, entertainment and leisure uses including Panthers World of Entertainment, Cables Wake Park and Aqua Park and iFLY Indoor Skydiving. The Penrith Whitewater Stadium, offering whitewater rafting and kayaking, and Sydney International Regatta Centre are also both situated nearby. As such, the proposed Winter Sports World is likely to benefit substantially from its location within this Precinct.

The centre is intended to be an Australian-first, world-class facility that would establish Penrith as the tourism capital of Sydney. It would target the corporate retreat market, with a focus on providing integrated package inclusions and employee bonding on the slopes, as well as also catering to local residents, and domestic and international tourists.

This complex would contain a range of uses including:

- Advanced ski slope (185 m run)
- Beginner and Intermediate ski slopes for training and lessons (115 m run and 80 m run respectively)
- 2,800 sq.m Winter wonderland snow play area
- Ice and rock climbing
- Ice skating rink
- 170 room hotel, conference facilities, restaurant and cafes (all with direct viewing of the slopes and snow play area)

The conceptual plans for the Winter Sports World concept are shown in the section 4. Section 4 details the proposed uses which will be accommodated within the complex, including their scale.

## methodology

This Urban Design Report has been prepared by Environa Studio to explore the consistency of the proposed building use and envelope with the existing and desired future development context.

The Report does this by analysing the existing development context of the site and the strategic direction for the precinct developed by Council. The Report then examines the impact of the likely built form of future development on the local area.

The Urban Design Report includes the following components:

- An analysis of the existing built form of the precinct.
- A review of the current built form controls for the site and surrounds.
- A review of the vision and objectives for the area expressed through key studies and strategies developed by Penrith Council.
- Identification of opportunities and constraints for future development of the site.
- A detailed study of the proposed building envelope and the compatibility of the envelope with the existing and future development context.

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## 2.0 site analysis

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## 2.1 location / configuration

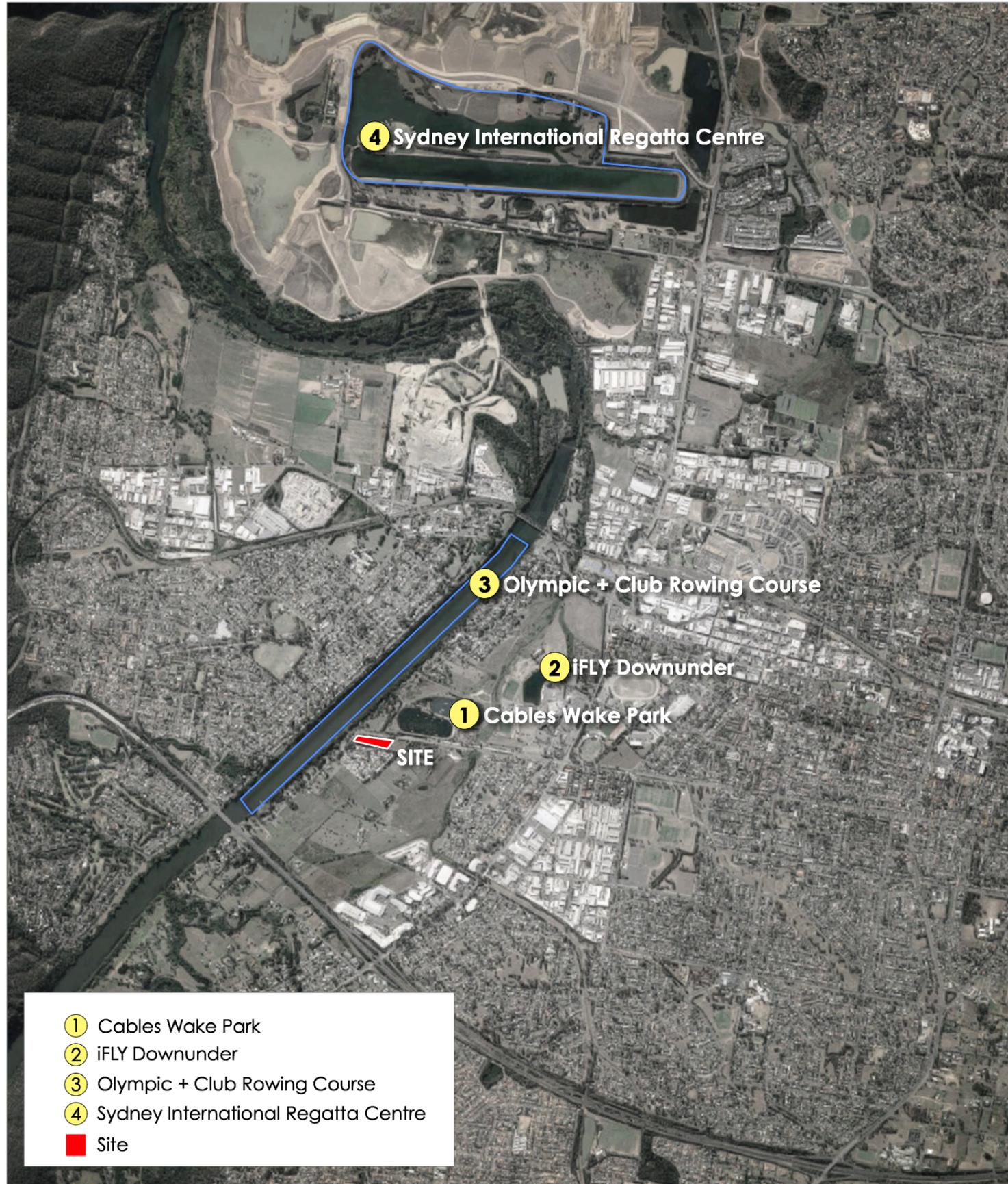


six maps

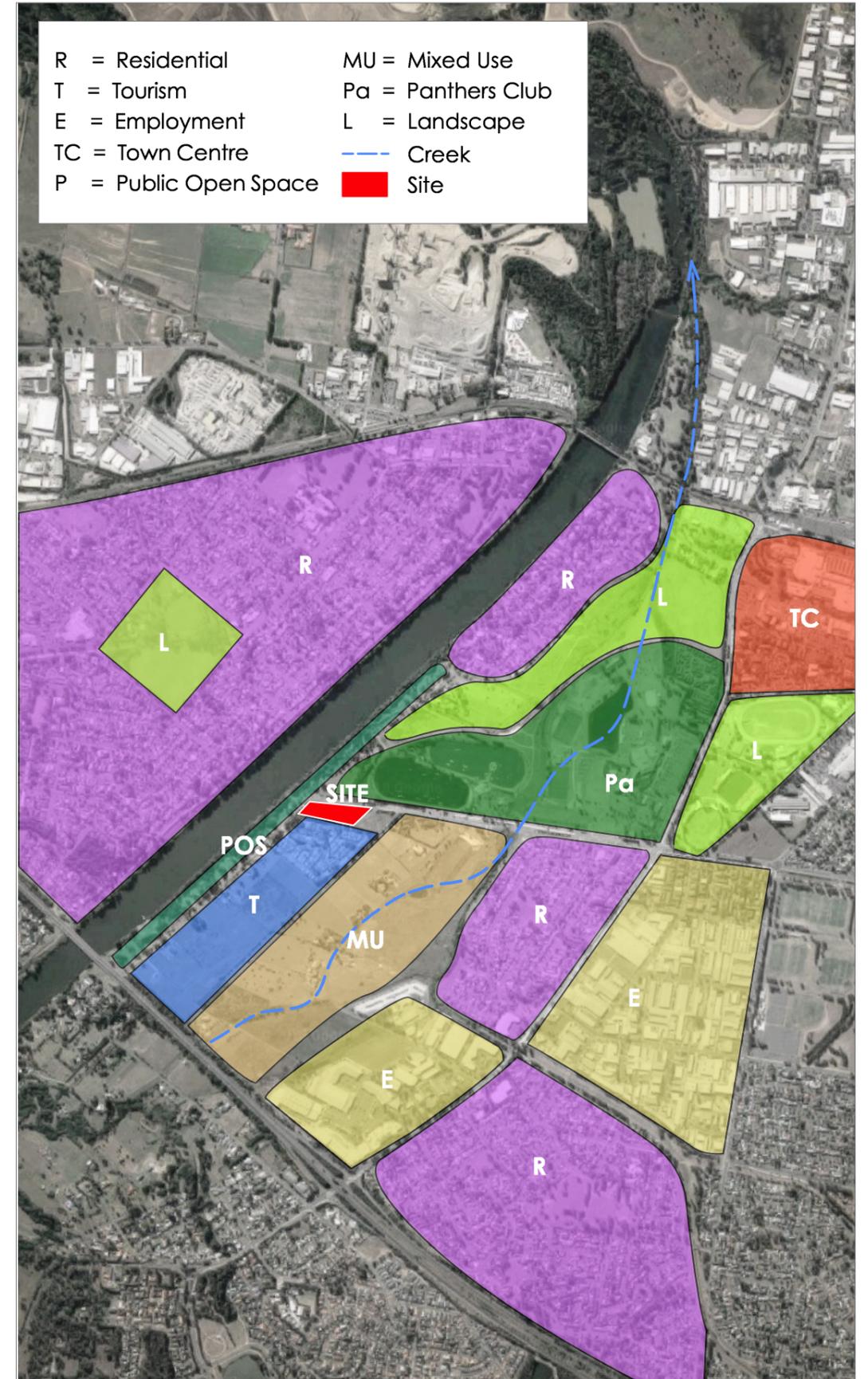
The site is at 2-4 Tench Avenue Jamisontown, on the corner of Jamison Rd. The site is 2.35 Ha (5.9 acres). The site has 2 frontages: a short, angled boundary that fronts Tench Avenue (parallel to the river), and the longer boundary of approximately 334 m facing north, along Jamison Rd. Jamison Rd is an E-W connector between Mulgoa Rd and the Nepean River. Mulgoa Rd is the N-S distributor street in Penrith, leading to the town centre and Penrith Panthers Club, which is within easy walking distance.

The site is relatively flat and is currently bounded by timber railing fences and is grassed but has no significant trees and has a single house and some areas set aside for grazing of horses and for domestic uses associated with the house. The current traffic on Jamison Rd presents minor acoustic considerations, which will increase considerably, particularly if Jamison Rd is widened, with is likely to significantly increase with further developments in the area. The site is zoned for "Tourism" activities.

## 2.1 location / configuration

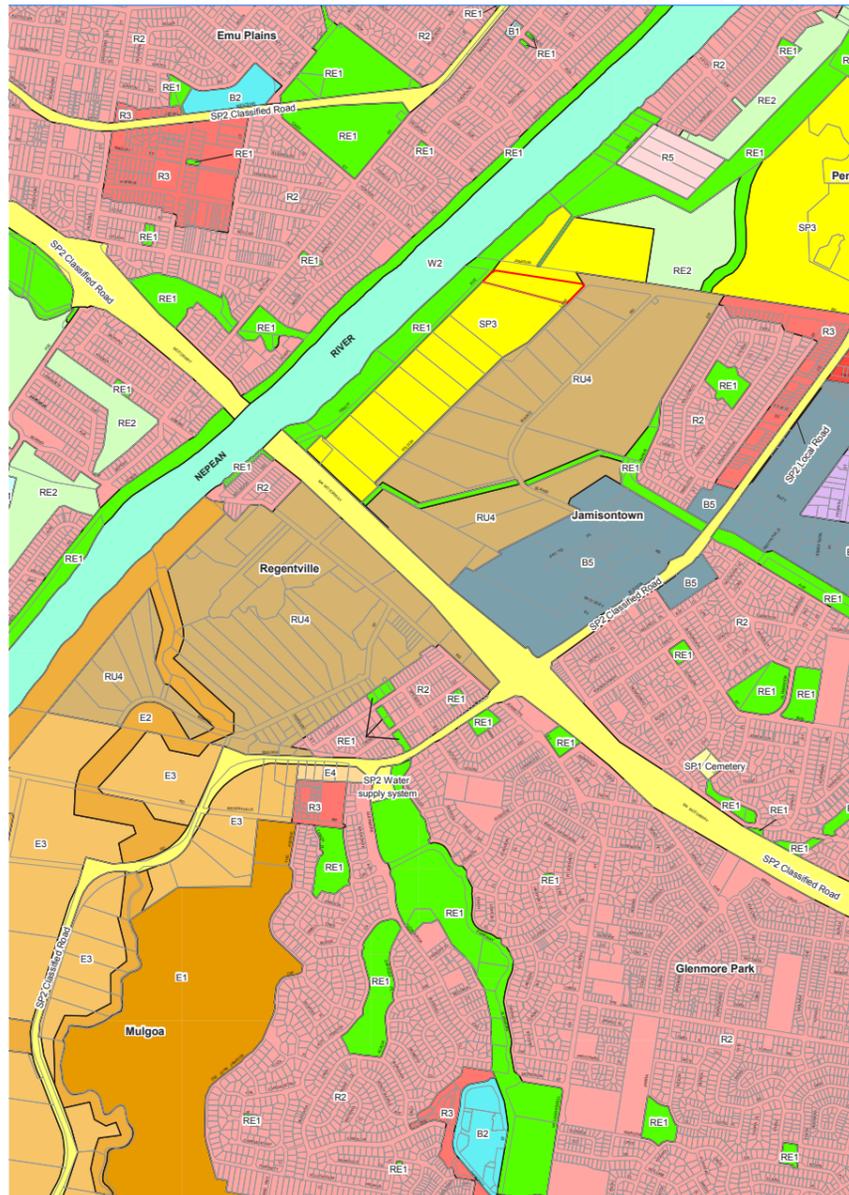


es diagram 1



es diagram 2

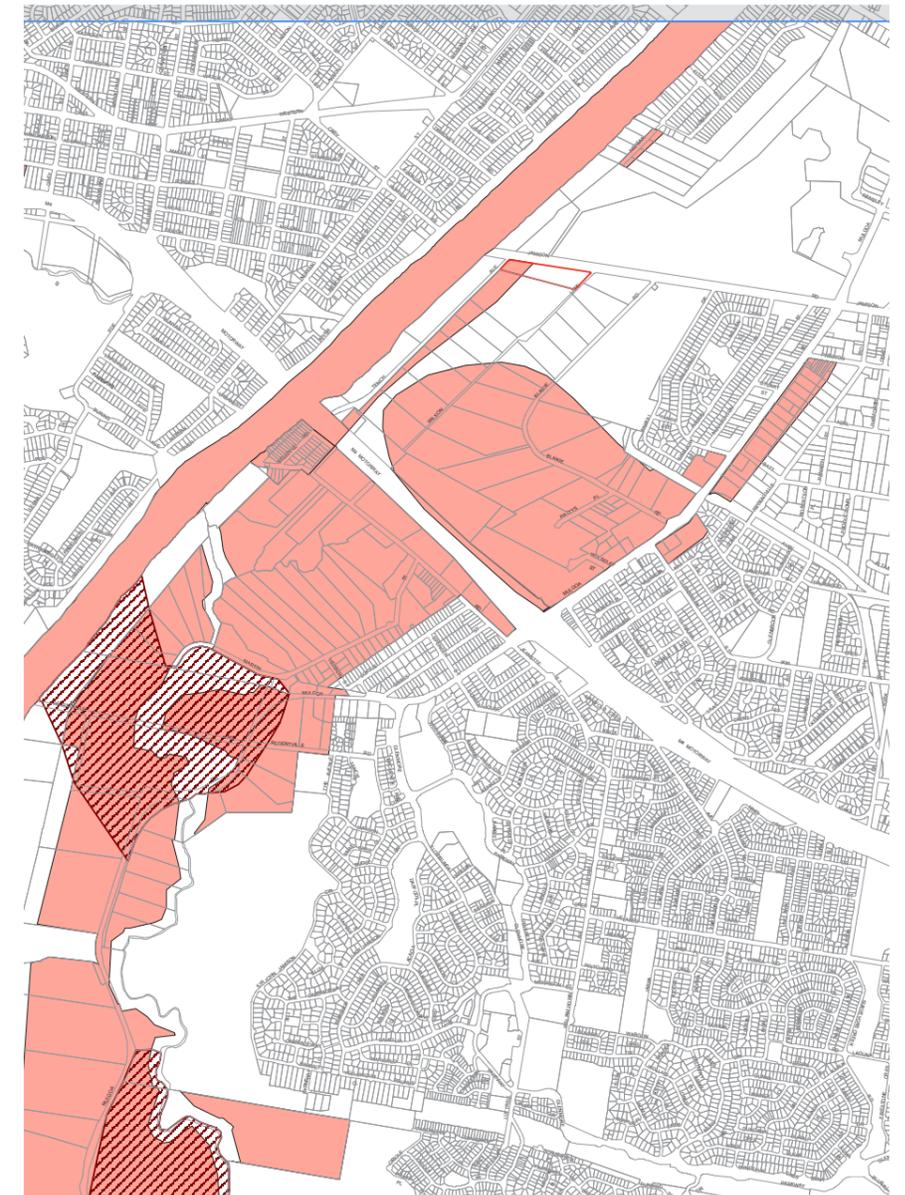
## 2.2 lep 2010 - current zoning / height / scenic + landscape values



extract from the lep 2010 land zoning map



extract from the lep 2010 height of buildings map



extract from the lep 2010 scenic and landscape values map

The site is within the SP3 Tourist zone pursuant to LEP 2010 as shown in Figure 2. The SP3 zone extends along the eastern side of Tench Avenue, from the M4 to Jamison Road. The SP3 zone includes 'Madang Park' and a portion of the Cables Wake Park. The SP3 zone permits a range of tourism related land uses such as amusement centres, recreation facilities (indoor and outdoor), water recreation structures and tourist and visitor accommodation. LEP 2010 limits the height of buildings within the SP3 zone (and the adjoining RU4 land) to 8.5 metres as shown in the LEP height of buildings map above.

The site is zoned "Tourist" and has a height limit of 8.5m. The site is identified as being subject to flooding. The land opposite the site, on the northern side of Jamison Road is zoned for tourism activities, as are the sites along Tench Avenue. The sites immediately to the east on the other side of the unmade road, Wilson Lane, are zoned rural. Wilson Lane has been graded and grassed and provides informal access in the case of emergencies.

NB: The Floor Space Ratio (FSR) development standard does not apply to the site or the surrounding land.

### Objectives of zone:

1. To provide for a variety of tourist-oriented development and related uses.
2. To provide for diverse tourist and visitor accommodation and activities that are compatible with the promotion of tourism in Penrith.
3. To create an appropriate scale that maintains important views to and from the Nepean River as well as to the Blue Mountains escarpment, while also improving important connections to the Penrith City Centre and the Nepean River.

### Response:

The Planning Proposal is consistent with these objectives in that the Proposal facilitates the development of a 'Winter Sports World' which includes an indoor ski centre with a 300 metre long ski slope. The facility is a specific and unique type of tourist-oriented development which will strengthen Penrith's claim for the title of 'The Adventure Capital of NSW'.

The Visual Analysis prepared by Envrona Studio demonstrates that important views to and from the Nepean River as well as to the Blue Mountains escarpment will be maintained from key locations surrounding the site. Existing connections to the Penrith City Centre and the Nepean River will be maintained.

### 2.3 existing + future character



view to the north-west from the rear boundary of the site



view to the east along Jamison Road from the northern side of Jamison Road, opposite the site



view to the Nepean River from the intersection of Jamison Road and Tench Avenue



view to the existing house from Tench Avenue



view to the east along Jamison Road



intersection of Jamison Road and Tench Ave



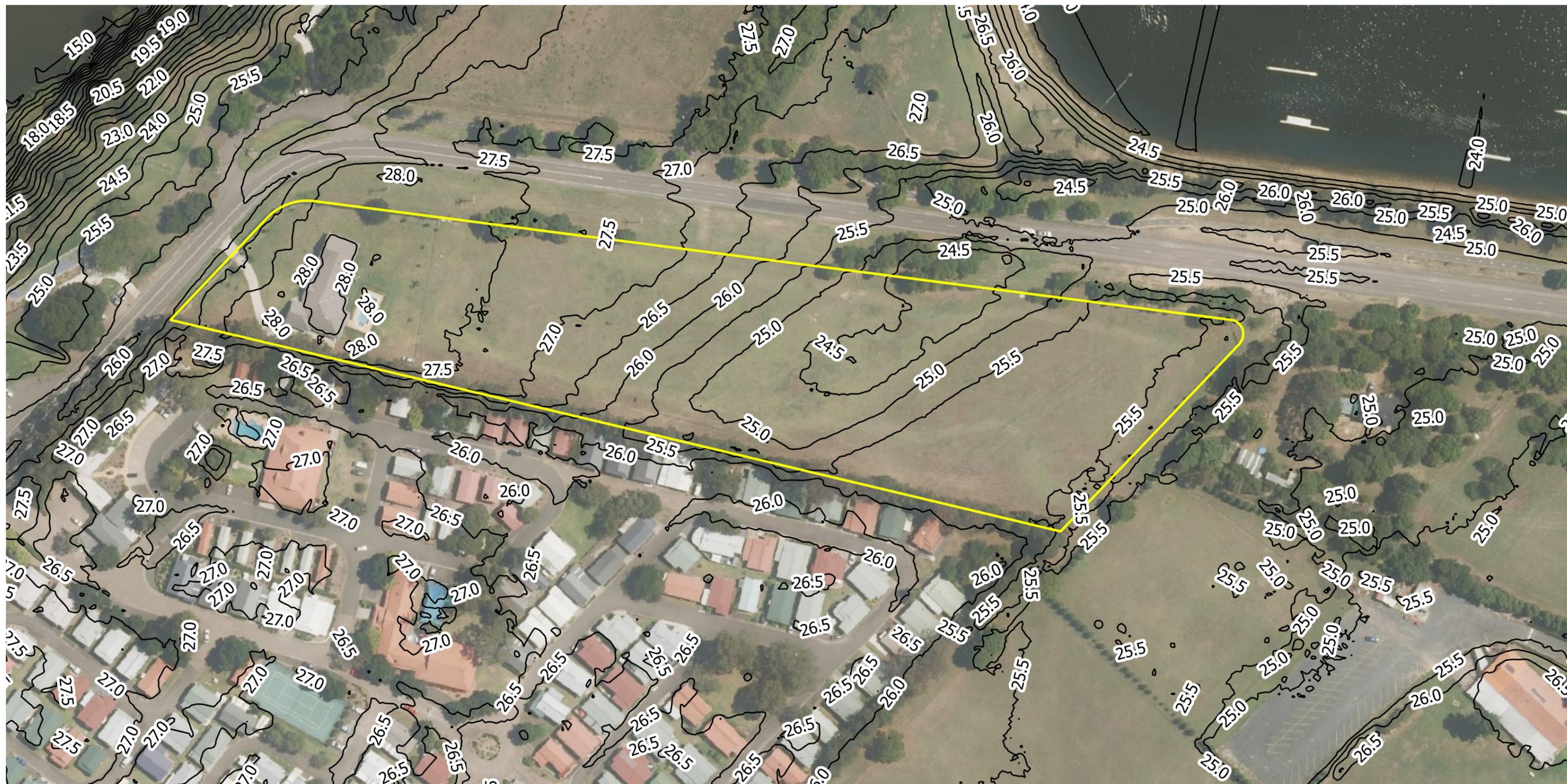
view to the south along Tench Avenue from the western side of Tench Avenue, opposite the site



view to the north-west from the southern side of Jamison Road (east of the site)

The existing character of the site is as a continuation of the 'rural uses' of open paddocks fringed with trees. The future character of the area is intended as a tourism precinct, with tourism facilities on both sides at the end of Jamison Road, creating a "gateway" to the Tench Avenue area which would include a number of tourism facilities which are not currently in existence or even proposed. It is envisaged that the Tench Avenue area will eventually become a series of tourism-related activities which may include food and beverage, accommodation and tourist activities along the length of Jamison Road arrival point and to the north there will be a new pedestrian path over the river near the Victoria Bridge.

## 2.4 topography + flooding

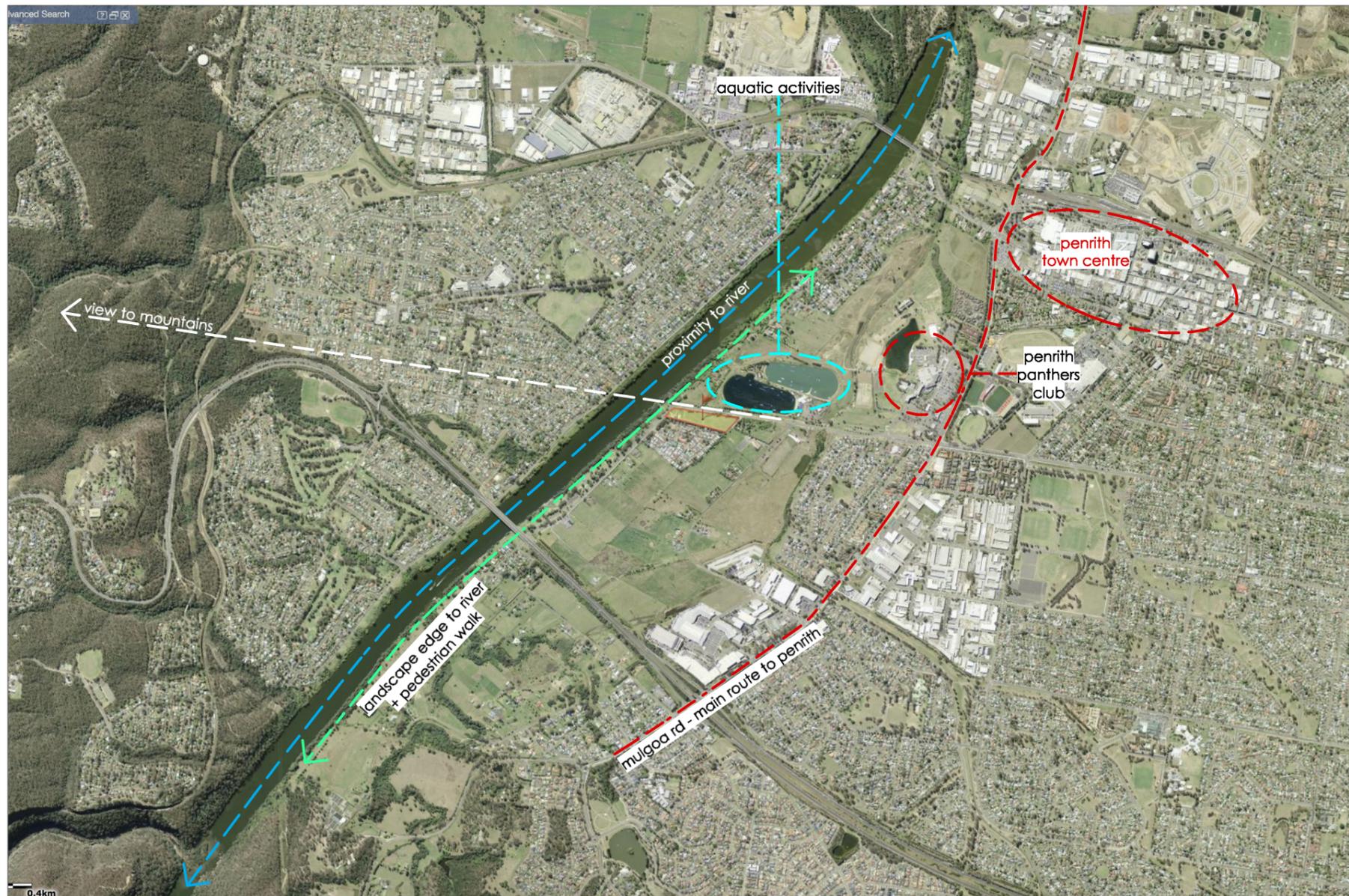


lidar study

The site is relatively flat, with a depression in the centre that allows Peach Tree Creek to drain across the site and along down into the Nepean River during extreme flood events. This may cause flooding at 1:100 year flood levels, which is covered in a flood report included with the Planning Proposal. The East and West ends of the site are both above the 1:100-year flood level.

The site will flood in a 1:100 year and above event. A full flood study of the site has been prepared and submitted with the planning proposal. This site and adjacent Jamison Rd have a depression in the centre which allows water that may collect upstream in the Peach Tree creek to pass under the site on its way to the Nepean River in a flood event.

## 2.5 views / vistas



landscape + visual location

The approach to the site along Jamison Rd has a line of sight across the river to the Blue Mountains, giving the first indication of hilly terrain in an otherwise flat river plain precinct.

The site is ringed with trees which limits the views from the current ground level. At an elevated level on the western end (near Tench Ave) there are vistas down over the Riverwalk and glimpses into the water of the Nepean River. From the northern boundary looking out over towards Madang Park, there are no views of Madang Park itself except for the heritage-listed trees that fringe that heritage site. In between the site and Madang Park is a large open grass area which is zoned for tourism.

Further to the east there are views over the "Wake Park" which is located to the northeast of the site. From an elevated position, one would be able to see the water and the water skiing on the artificial lake. The views to the south are framed by a line of densely planted gum trees that currently attain a height of approximately 20 metres along the length of the mobile home park. The understorey of these trees is relatively open giving a view at ground level of the one storey villas within the mobile home park, however the upper level of any building would have an obscured view, as the density of those trees, and the trees beyond on Tench Ave, prevent any distant views towards the river and the bridge on the M4. Likewise, the views back to the site from the upper areas of the Nepean River and the Victoria Bridge are obscured by those trees (see visual analysis report).

The views to the site are covered in a visual analysis showing 39 different locations around the site and the views to the site and the possible vista views of the proposed building.



view to the mountains from the site



view along the nepean river towards the site



view of site from emu plains

## 2.6 context



six maps

The context for the site is mixed and varied, being a vacant site zoned for tourism, an adjacent site which is currently used for tourism activities (water skiing), a rural site that is currently an underdeveloped mix of tourist accommodation (permissible) and permanent dwellings (nonconforming).

The adjoining site to the South is a mix of tourist accommodation (cabins) and permanent dwellings (seniors living dwellings). Residential accommodation such as the existing seniors living developments are a prohibited development in the zone so this component of the existing development is a non-conforming use under the current LEP. The tourist accommodation is permissible.

The site is bounded by Tench Avenue on one side (the other being a park along the Nepean River) and Jamison Road (which has a pedestrian / cycleway on the opposite side). Jamison Rd has a relatively level gradient having a small dip in the centre of the site but is otherwise relatively level all the way back to Mulgoa Road.

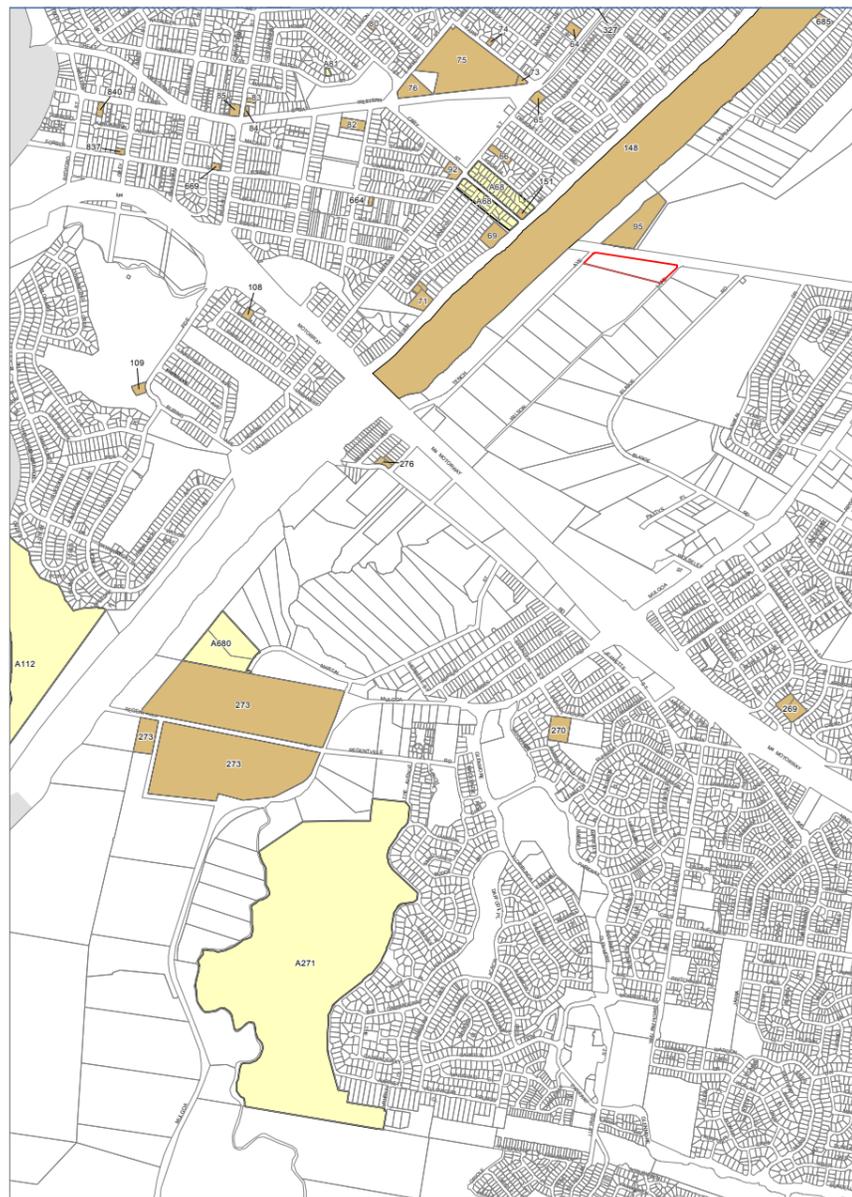
The site has street trees along the length of Jamison Road in a rather ragged state and informal arrangement. This is in contrast to an avenue of trees on the other side of Jamison Road that have been specifically planted to celebrate to 50 years of Penrith Council activity.

Further east on Jamison Road is the most southwestern end of the lands owned by the Penrith Leagues Club (Panthers) and is currently used as a "Wake Park", an artificial water-skiing facility where the entrance is further East on Jamison Road.

The site at its western extremity faces down over the Nepean River and is adjacent to the Riverwalk on the far side of Tench Avenue, together with the landscape treatment of trees and various barbecue and other shelters along the length of the walk.

Jamison Road currently has one vehicle lane in each direction with very wide verges, and there is a pedestrian/cycleway on the northern side (opposite the site) which runs the length of Jamison Road from Mulgoa Road down to the Riverwalk and provides pedestrian and cycle access to the pedestrian/cycleway along the length of the Nepean River. Tench Avenue currently has one vehicle lane in each direction with parking bays on the river side.

## 2.7 heritage



extract from the lep 2010 heritage map



nepean river green bridge, page 142



view to madang park

View towards the heritage home, Madang Park, which is totally obscured from view from the site and Jamison Road by the heritage listed trees. Likewise there is no view from the house to the proposed building.

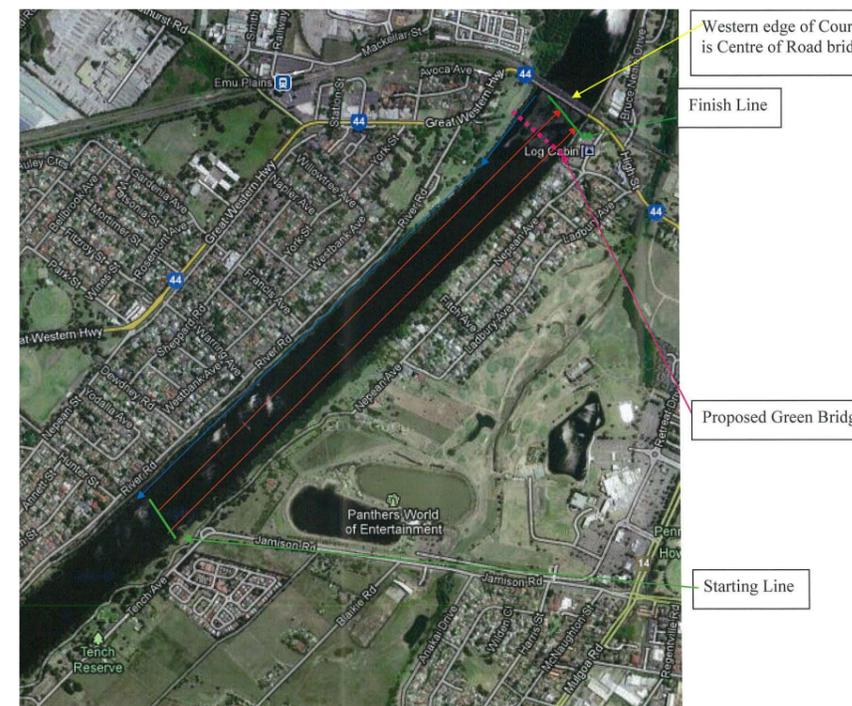
Opposite the site is an open field area with a heritage house, Madang Park, which is a homestead fringed with trees. It is identified as a heritage item with local significance under the PLEP 2010 (Item No.95). Currently the area is also surrounded by cars and other detritus which detracts from its visual appearance from Jamison Road. This open area of the site is zoned for tourism, provided that the heritage values of Madang Park and its proximity to the Nepean River are considered in the design.

From the northern boundary looking out over towards Madang Park, there are no views of Madang Park itself except for the heritage-listed trees that fringe that heritage site. In between the site and Madang Park is a large open grass area which is zoned for tourism.

The site is also in the vicinity of the rowing course on the Nepean River which is listed as a heritage item (Item No. 148).

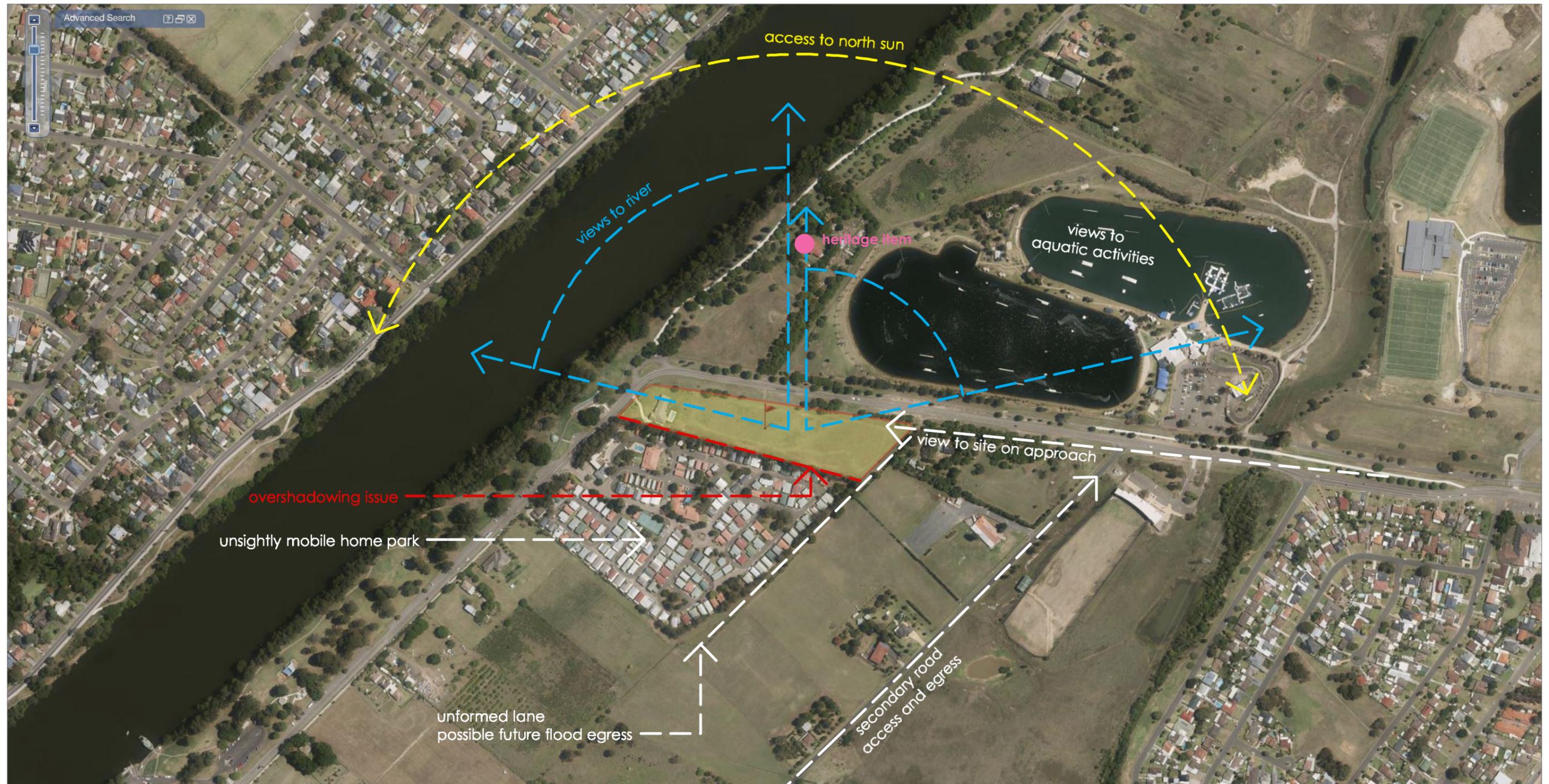


nepean river green bridge, page 16



international 2km course - nepean river green bridge, page 182

## 2.8 site analysis issues



site analysis plan

The linear nature of the site has advantages and disadvantages. The advantage is in providing a large north facing area, for access to views to the river and the aquatic activities. That is the long boundary has both good aspect and good prospect. However, the narrow nature of the site presents an issue for overshadowing of the adjacent site to the south, which is currently used as a mobile home village (now a non-conforming use).

The long axis facing north provides opportunities for both passive and active solar uses for a future building (such as a large area for roof-top solar PV cells to assist in making a building low energy or carbon neutral). The river is close in proximity but cannot be seen from ground level on the site given the lines of trees along the southern bank. The site also has restricted views to the district at ground level but views over the river and beyond are possible at height.

The west end of the site has a low scale of trees and walking / running / cycling paths along the river, and this low scale should be maintained. The east end of the site is wider and faces Wilsons Lane (an unmade road) and a change of zoning that is open and flat (rural uses). This end of the site is well viewed on approach on Jamison Rd and could potentially be developed a far greater height.

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## 3.0 urban design issues

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### 3.1 urban design issues introduction

This report examines the urban design issues that arise from examining a number of relevant reports, including but not limited to;

- **Greater Sydney Region Plan – A Metropolis of Three Cities - March 2018**
- Western City District Plan - March 2018
- Penrith Community Plan - June 2017
- Economic Development Strategy (EDS) Penrith Council - 2016
- **Penrith Local Environment Plan 2010**
- **Penrith Development Control Plan 2014**
- State Environmental Planning Policies
- Nepean River Green Bridge Review Of Environmental Factors 2014 (NGH)
- Nepean River Green Bridge Design Evaluation Report 2013 (RMS)
- **Riverlink Precinct Plan 2008 (PCC)**
- Riverlink Precinct Urban Design Study 2009 (PCC)
- **'Our River' Nepean River Master Plan 2013 (PCC + Clouston Associates)**

The reports highlighted in **bold** are addressed in detail in this section.

## 3.2 greater sydney region plan 2018

Extracts from report;

### Greater Penrith to Eastern Creek Growth Area (page 66)

A growth area connecting the Penrith CBD and St Marys through to the M7 Motorway/Eastern Creek with new mass transit lines has been identified. This provides the opportunity to integrate land use and transport planning at a suitable scale. Growth in appropriate locations can contribute to a connected, vibrant Western Parkland City with more homes, jobs, services and open space...

...The growth area includes activity nodes such as the Penrith CBD, the Penrith health and education precinct as well as the centres of St Marys, Mount Druitt and Rooty Hill. Work on this area will build on that undertaken for the Greater Penrith Collaboration Area and will include strategies to promote tourism. It will consider opportunities to capitalise on the benefits of the potential development and expansion of health, education or other social infrastructure in these centres.

### Objective 25 - The coast and waterways are protected and healthier (page 148)

In the Western Parkland City, the Hawkesbury-Nepean River is a highly valued natural asset that links protected bushland, rural and urban areas and Penrith Lakes as a world-class sporting and recreational facility.

#### Response

The project is a tourism related development which will contribute to the expansion of greater Penrith as per the 2018 Greater Western Sydney Region Plan.

Linking business and leisure visits provides better experiences and has widespread benefits.

WSW can join Sydney Olympic Park, Western Sydney Stadium and the like as world-class sporting and recreational facility and a major attractor for sporting and cultural events. Contributing to the future sustainability and liveability of the Western Parkland City.

### Objective 37 - Flooding risk from Hawkesbury-Nepean River

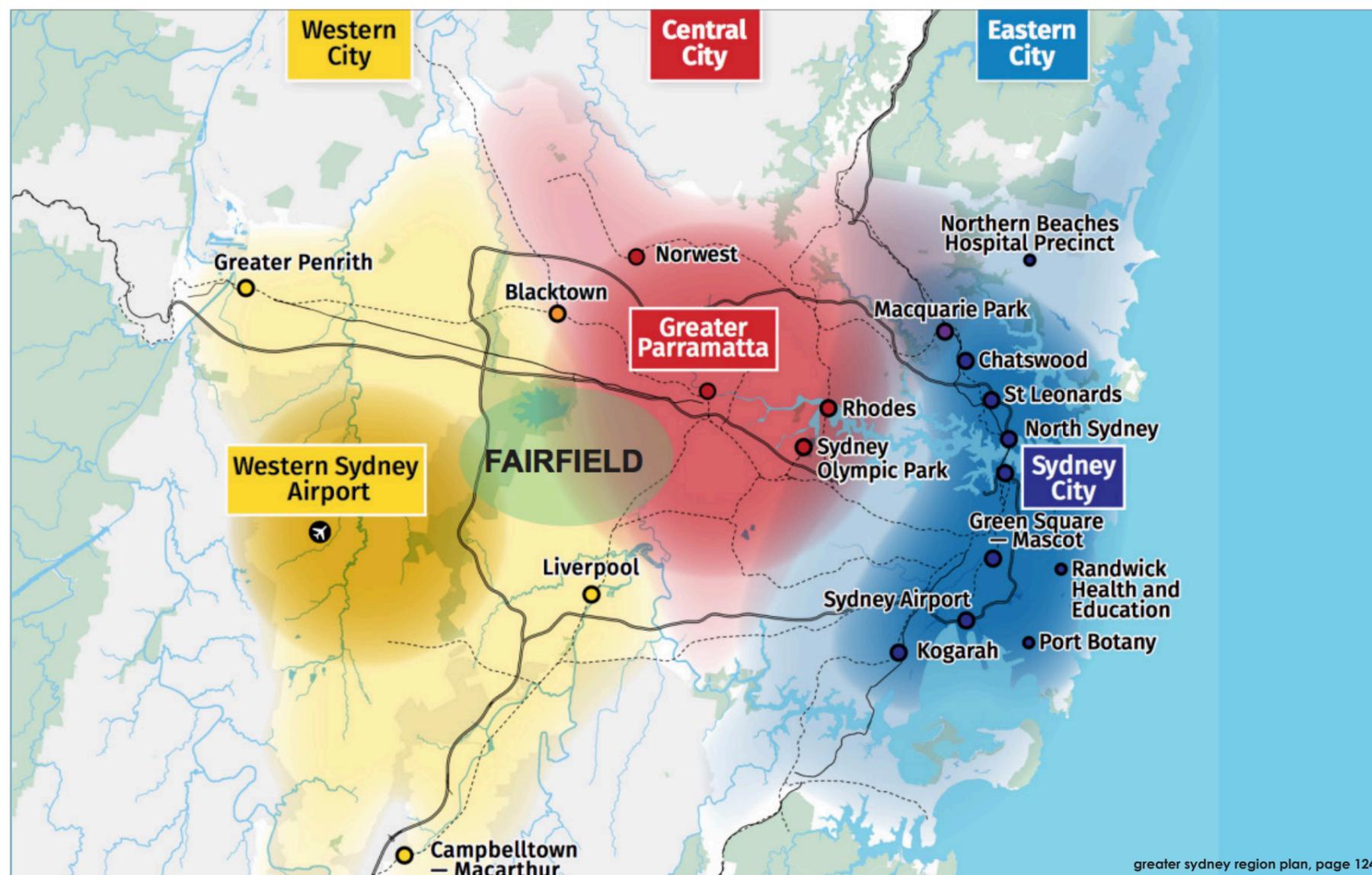
under the Direction 'A Resilient City' is for exposure to natural and urban hazards to be reduced. Of relevance to the Planning Proposal is that the Plan notes that the Hawkesbury-Nepean Valley has a high flood risk and climate change may increase the severity and frequency of floods in the future.

The Resilient Valley, Resilient Communities – Hawkesbury-Nepean Valley Flood Risk Management Strategy aims to reduce the potential risk to life, the economy and communities. This strategy highlights the importance of strategic and integrated land use and road planning and adequate roads for evacuation. Given the severity and regional scale of the flood risk, the strategy looks at areas affected by the probably maximum floor a well as the 1 in 100 chance per year flood.

Strategy 37.2 is to respond to the direction for managing flood risk in the Hawkesbury-Nepean Valley as set out in Resilient Valley, Resilient Communities – Hawkesbury-Nepean Valley Flood Risk Management Strategy.

#### Response

The proposed amendment to the maximum height of buildings permitted on the site does not increase the flood risk for future development on the site. The additional height in fact provides greater flexibility in designing a building that minimises the risk. Notwithstanding this a Concept Flood Risk Management and Stormwater Management Report prepared by ACOR Consultants is included as Appendix 7 to demonstrate that the proposed development can satisfy current flood management requirements and that an adequate flood evacuation route and appropriate evacuation procedures can be implemented.



greater sydney region plan, page 124

### Objective 24 - Economic sectors are targeted for success

#### Tourism, Strategy 24.2 (page 140)

Under the Direction for 'Jobs and skills for the city' is that economic sectors are targeted for success. Tourism is identified in the Plan as a key economic sector which is to be supported and developed.

The Plan notes that Destination NSW has developed the Western Sydney Visitor Economy Strategy and will continue to secure and grow events in Western Sydney. The Plan also recognises that the Western Sydney Airport creates opportunities for the Western Parkland City to become an alternative to the Eastern Harbour City for international tourists. Alliances between councils and key industry stakeholders are encouraged to create opportunities to cross-promote events, develop and support a wider range of activities and importantly, realise the opportunities as the Western Sydney Airport and Badgerys Creek Aerotropolis develops. (p140)

Strategy 24.2 of the Plan relates to Tourism. Strategy 24.2 is to consider the following issues when preparing plans for tourism and visitation:

Encouraging the development of a range of well-designed and located facilities;

- Enhancing the amenity, vibrancy and safety of centres and township precincts,
- Supporting the development of places for artistic and cultural activities

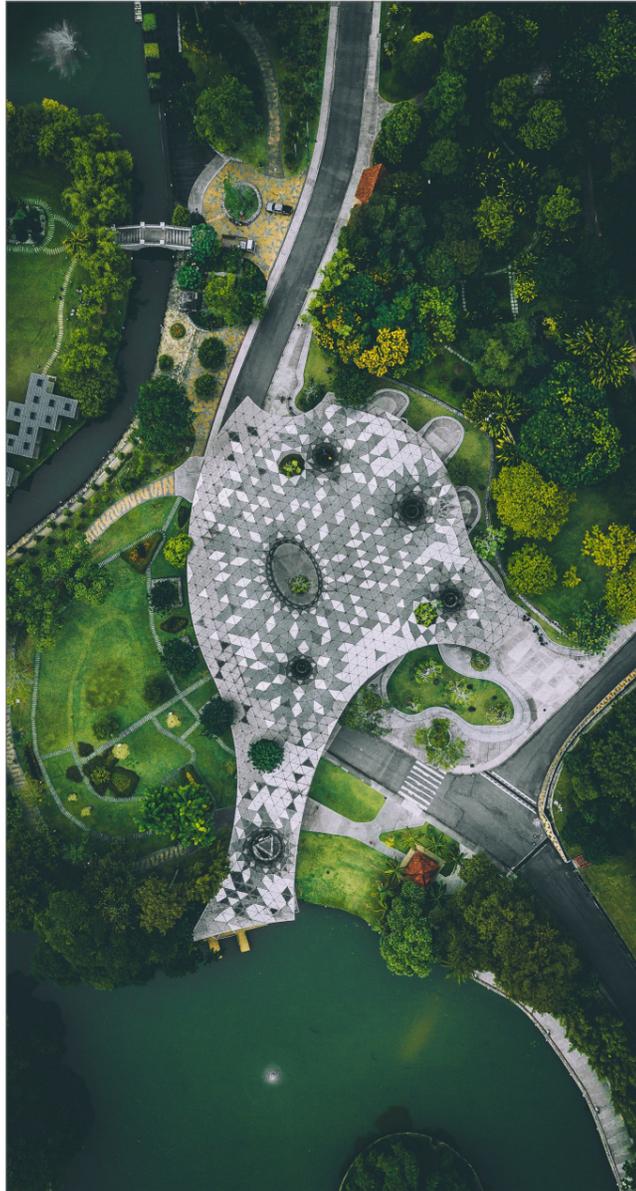
- Improving public facilities and access
- Protection heritage and biodiversity to enhance cultural and eco-tourism,
- Supporting appropriate growth of the night-time economy//
- Developing industry skills critical to growing visitor economy
- Incorporating transport planning to service the transport access needs of tourists.

#### Response

WSW will facilitate the development of a use that supports the Greater Sydney Region Plan's strategy for Tourism as follows:

- The proposed 'Winter Sports World' facility is located on land that is already zoned for tourist-oriented development and related uses. The proposed use is therefore in an appropriate location.
- The 'Winter Sports World' will stimulate and support tourism related development in the Riverlink Precinct .
- The Western Sydney Airport is located approximately 20 kilometres driving distance from the site. The recreation facility is therefore ideally located to take advantage of improved access to domestic and international visitor markets and the population growth in Western Sydney that will be driven by the new airport.

### 3.3 penrith DCP 2014 - E13 riverlink precinct objectives



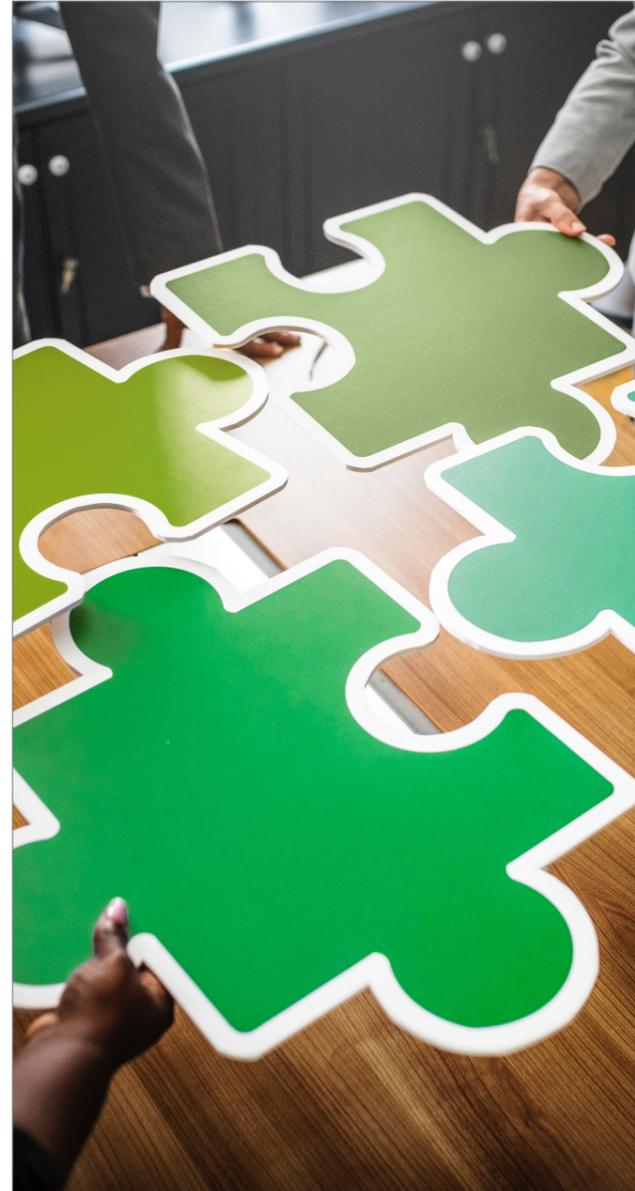
#### 1. connectivity and links

##### Objectives:

- To create strong synergies with the Penrith City Centre by optimising the proximity to the centre and complementing its land uses and character areas.
- To create the Riverlink by strengthening the relationship to and connection with the Nepean River.
- To reinforce transport links and pedestrian connections to the Penrith City Centre and public transport hubs.
- To improve links and connectivity across the Precinct and between the various landholdings.

##### Response:

The proposal sits on Jamison Road which is identified as a key linking road making a connection between the town centre and the Nepean river.



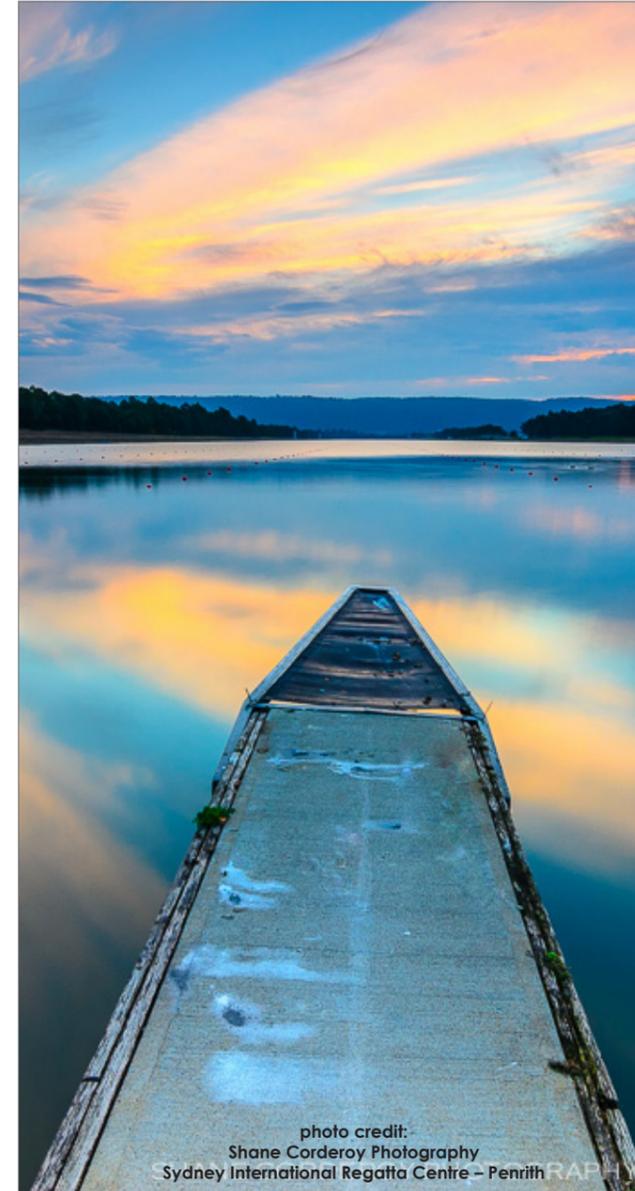
#### 2. co-operation

##### Objectives:

- To address precinct issues such as flooding and access through collaboration with key stakeholders within the Riverlink Precinct.

##### Response:

The flooding issues are noted and a full flood study has been undertaken to identify ground levels, flow paths and water catchment in conjunction with Penrith City Council. An evacuation plan has been developed in consultation with the State Emergency Services (SES).



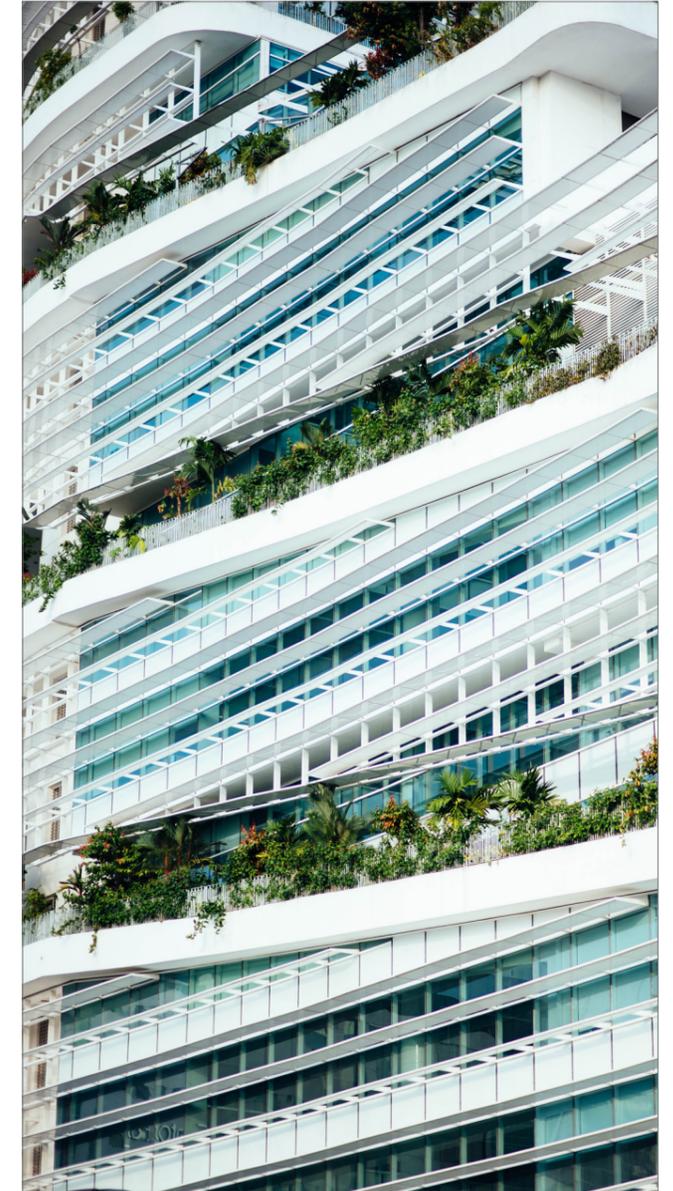
#### 3. local character + regional appeal

##### Objectives:

- To reinforce and enhance local identity and sense of place through public domain and building design.
- To create a highly desirable visitor destination.
- To create an exciting new entertainment, leisure and lifestyle hub.

##### Response:

The proposal is for an active leisure facility, contributing to Penrith's identity as an 'adventure capital'. This will enhance the local identity, create a highly desirable visitor destination and create an exciting new entertainment, leisure and lifestyle hub.



#### 4. design excellence

##### Objectives:

- To meet and exceed sustainability benchmarks, including water quality.
- To achieve public domain and architectural design excellence

##### Response:

The building will reflect the natural setting through colours and materials; the building will be a carbon neutral building using a biophilic design for the exterior façades and will significantly enhance landscape of avenues of trees to both connect the building to the surrounding landscape and mask its scale.

### 3.3 penrith DCP 2014 - E13 riverlink precinct objectives

#### built form future character (13.3)

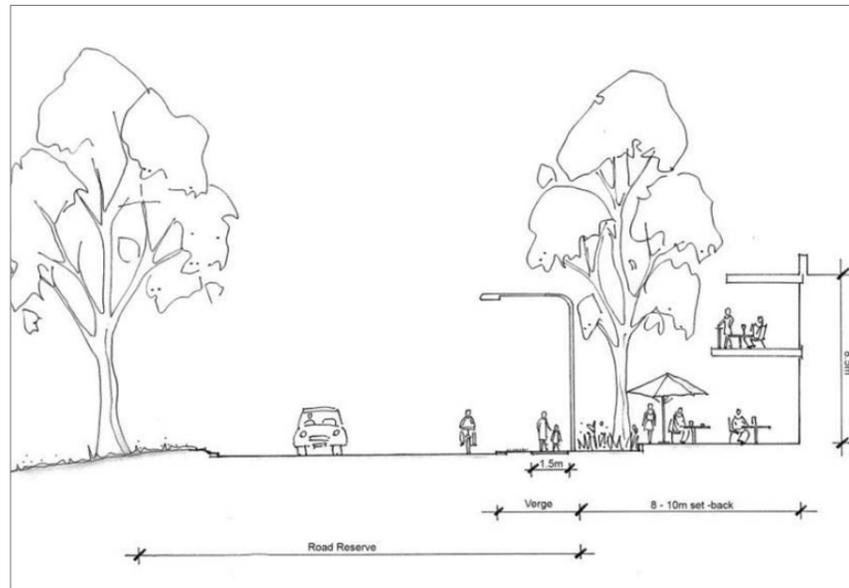


figure E13.4: cross section of preferred development with 8-10m setback along tench ave DCP - page 11

The strategic plans for the Riverlink Precinct strongly promote the development of a tourism and recreation precinct that is focused around the river. The concept has been implemented through the SP3 Tourist zoning of land along the River (particularly along Tench Avenue).

The strategic plans do not set out a clear vision for the desired built form within the tourism and recreation precinct. A detailed study of the built form controls needed to stimulate and facilitate the development of such a precinct has not been undertaken. This could be due to the difficulty in predicting the exact future entertainment and leisure based uses that would be developed in the precinct and the specific and unique built form of such uses. Even if a detailed urban design study for the precinct had been undertaken, such a study could not have anticipated or allowed for the height needed for Winter Sports World facility.

The future character of the area is intended as a tourism precinct, with tourism facilities on both sides at the end of Jamison Road, creating a "gateway" to the Tench Avenue area which would include a number of tourism facilities which are not currently in existence or proposed. It is envisaged that the Tench Avenue area will eventually become a series of tourism-related activities which may include food and beverage, accommodation and tourist activities along the length of Jamison Road arrival point.

This Urban Design Report therefore demonstrates that the built form of the Winter Sports World is compatible with the future character of the precinct.

#### tourism and recreation precinct (13.4.2)

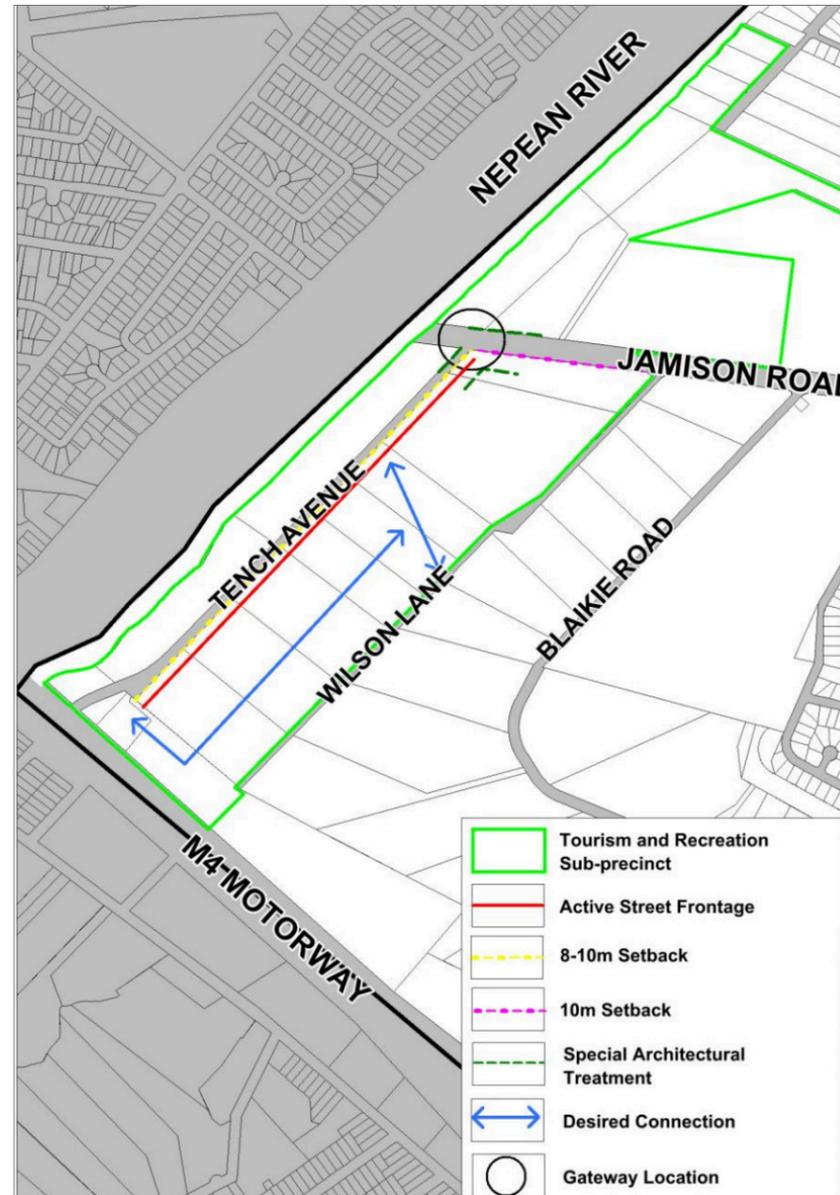
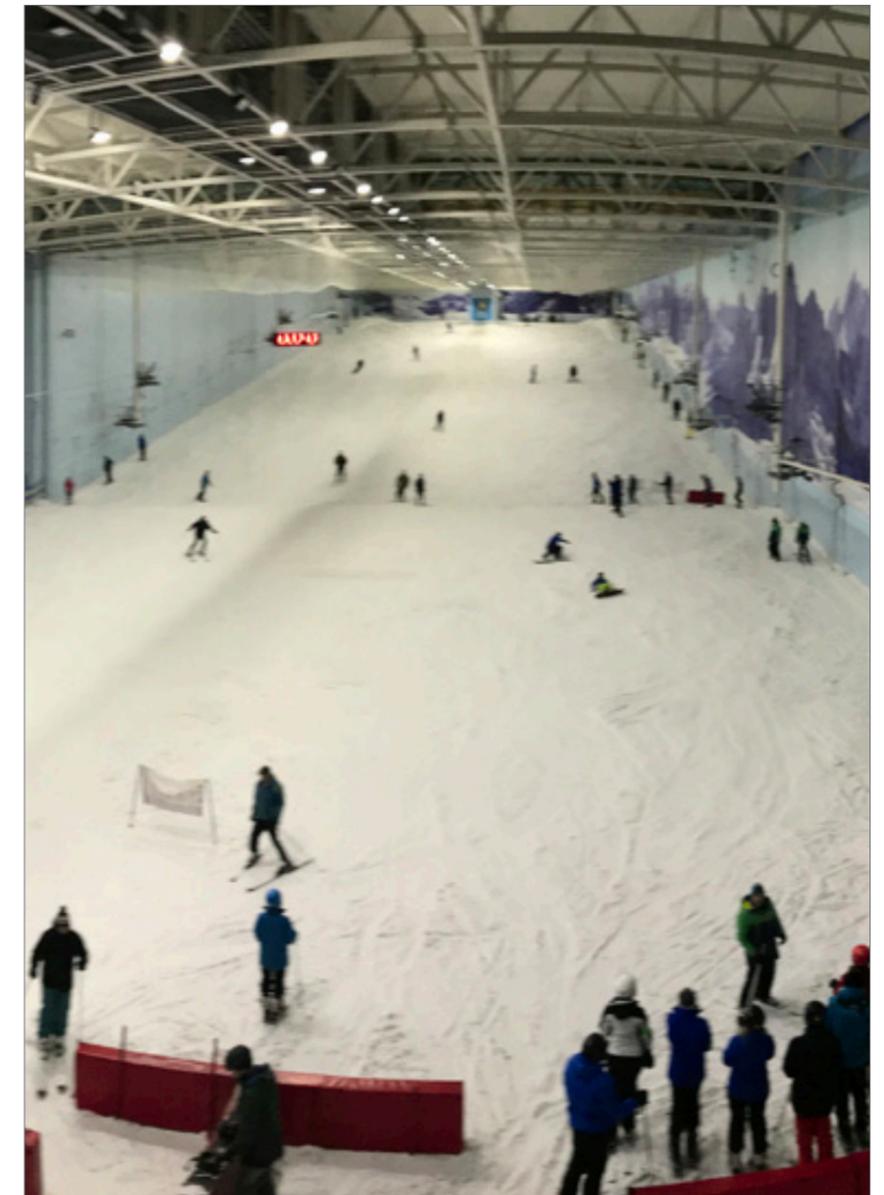


figure E13.8: tourism and recreation precinct

#### Objectives:

- a) Be a destination – provide a river park for the people
- b) Provide a strong sense of arrival along Jamison Road
- c) Create a connected, active and vibrant river with a wide range of recreational opportunities at hubs both on and off the water
- d) Create spaces and places for people to celebrate the community's culture and diversity

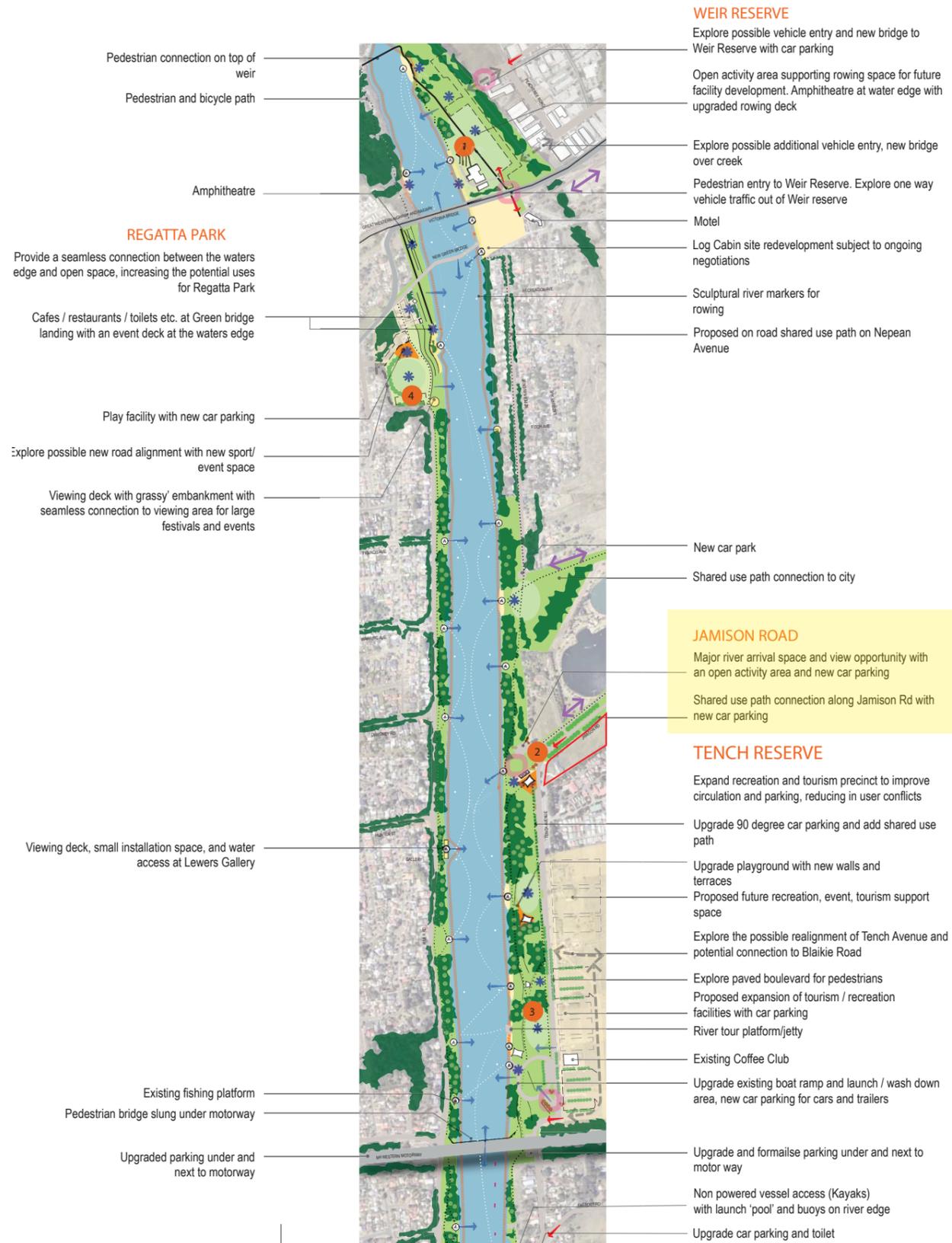


similar indoor ski centre

#### Response:

The proposal can meet and exceed each of the four defined objectives

### 3.4 our river masterplan report 2013

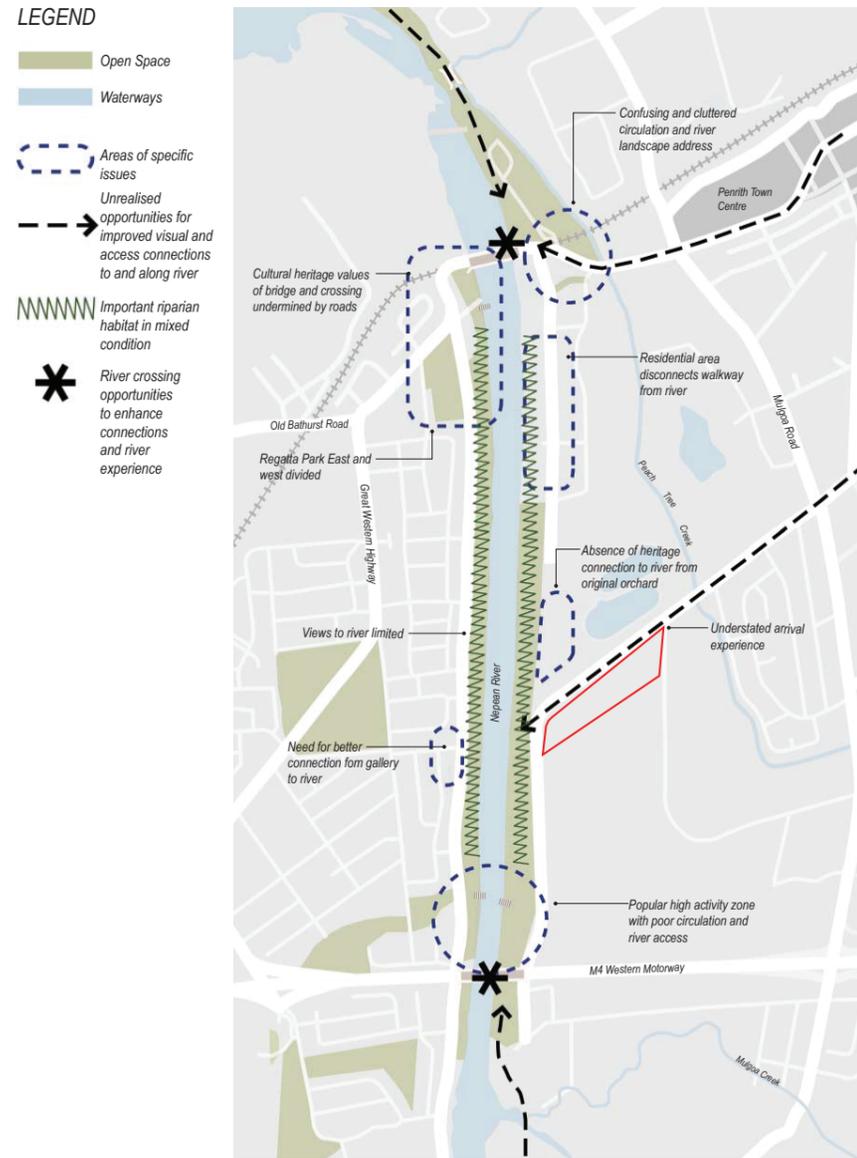


page 12 'our river' master plan report

**Response**

"Our River" masterplan report identifies the critical importance of the Jamison Road entry to the central river district of the Nepean River, and the desirability of opening current vegetation and planting to enable a vista along Jamison Road across the river.

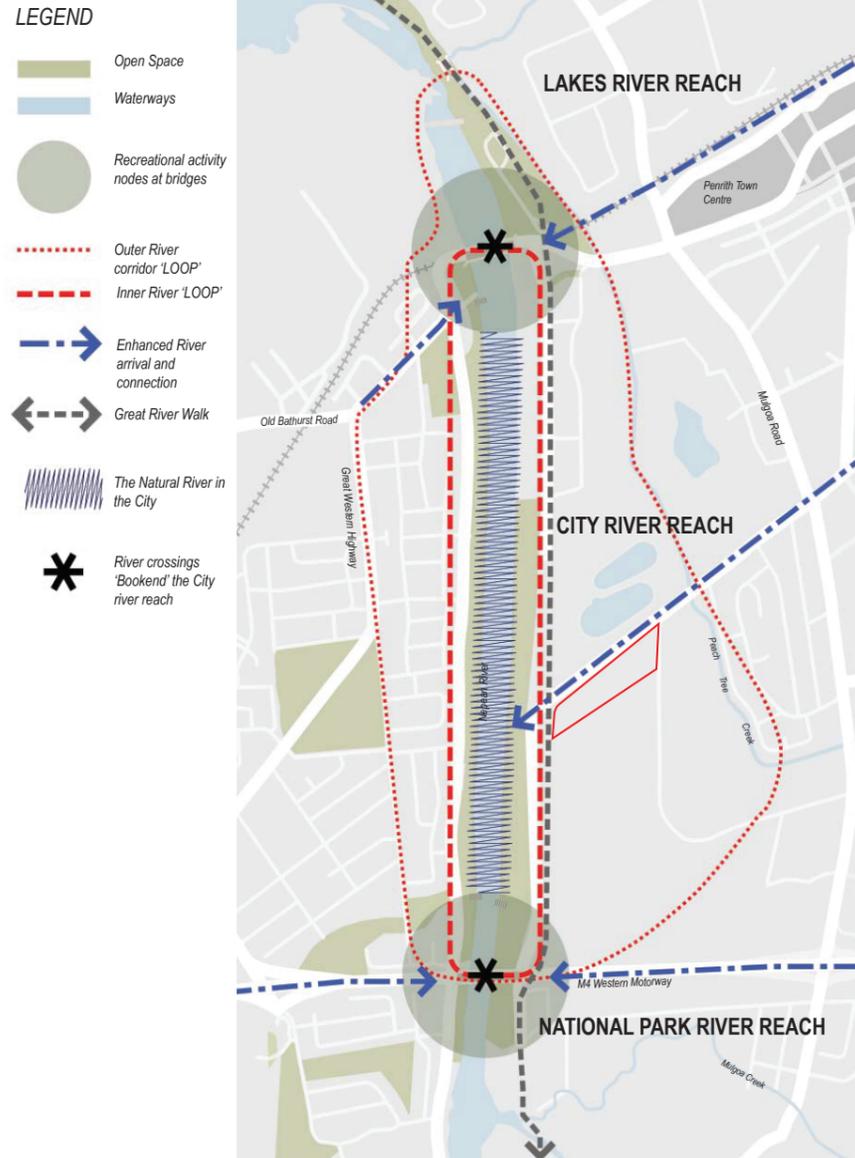
### 3.4 our river masterplan report 2013



summary of constraints - page 8 'our river' master plan report

**Response**

Jamison Road is currently an understated arrival experience. Any proposal on this site would need to address the north-facing possibilities from the site looking over Jamison Road to emphasise the linear arrangement and possibilities for vistas and views, not only to the river but beyond to the Blue Mountains. A companion building would be desirable on the opposite side of Jamison Road, to create a pair of buildings at the arrival point. The companion would be thin so as to minimize the way it impinges on the heritage item to the north.



summary of opportunities - page 9 'our river' master plan report

**Response**

The intention to create a consistent landscape and pedestrian experience between the two bridges will require a continuity of trees along the riverbanks with notable openings for viewing down to the river. The key position at the end of Jamison Road is the most important visual connection between these two bridges. Current proposals include an increase of the tree-lined avenues along Jamison Road in order to enhance an opening at the river arrival point. Therefore, it will be necessary to remove some of the trees at that point and regrade the road so that the intersection is no longer a steep embankment but a flatter intersection. Both these actions will allow for increased vistas from the river up to Jamison Road, but with careful control of the axiality of planting.

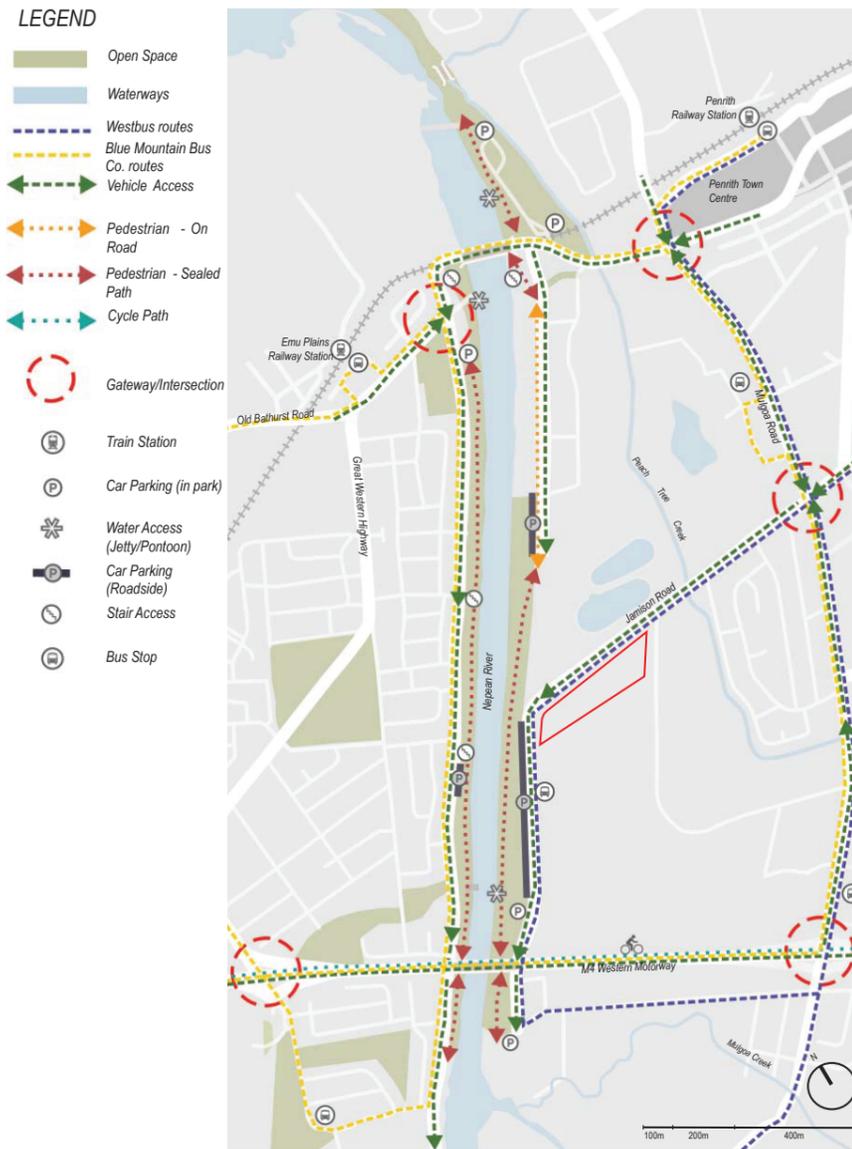


land use and activities - page 34 'our river' master plan report

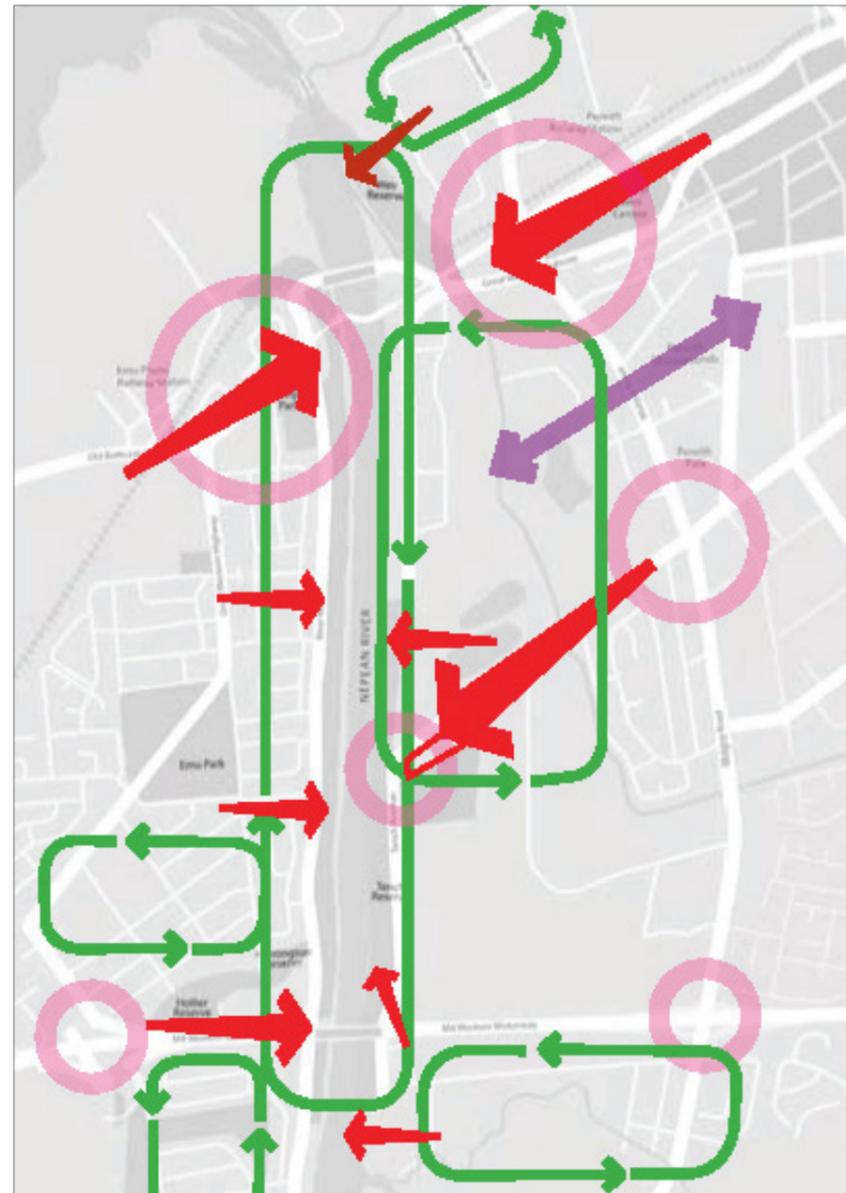
**Response**

The space between the western end of the proposed building and the river is a key public space that needs to be considered very carefully. The desired vista along Jamison Road will ensure that a view to the water is possible through a small opening in the continuous tree line, provided that the slope of the land is regraded in a continuous slope down towards the river. This would have major impacts on the shaping of the road and the intersection of Jamison Road to Tench Avenue. This will likely mean regrading the road at that point into some form of roundabout or more highly structured intersection.

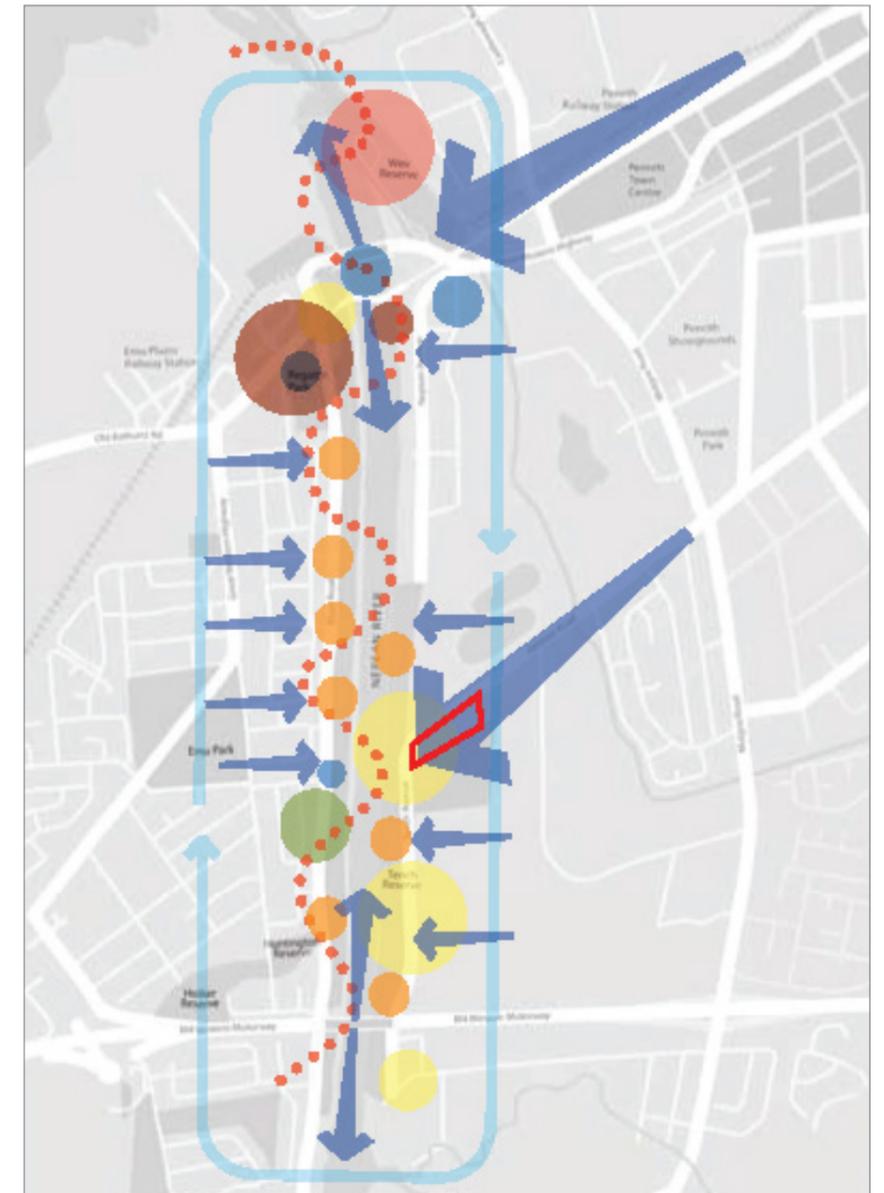
### 3.4 our river masterplan report 2013



access, circulation and wayfinding - page 35 'our river' master plan report



principles - our accessible river - page 48 'our river' master plan report



principles - our cultural river - page 50 'our river' master plan report

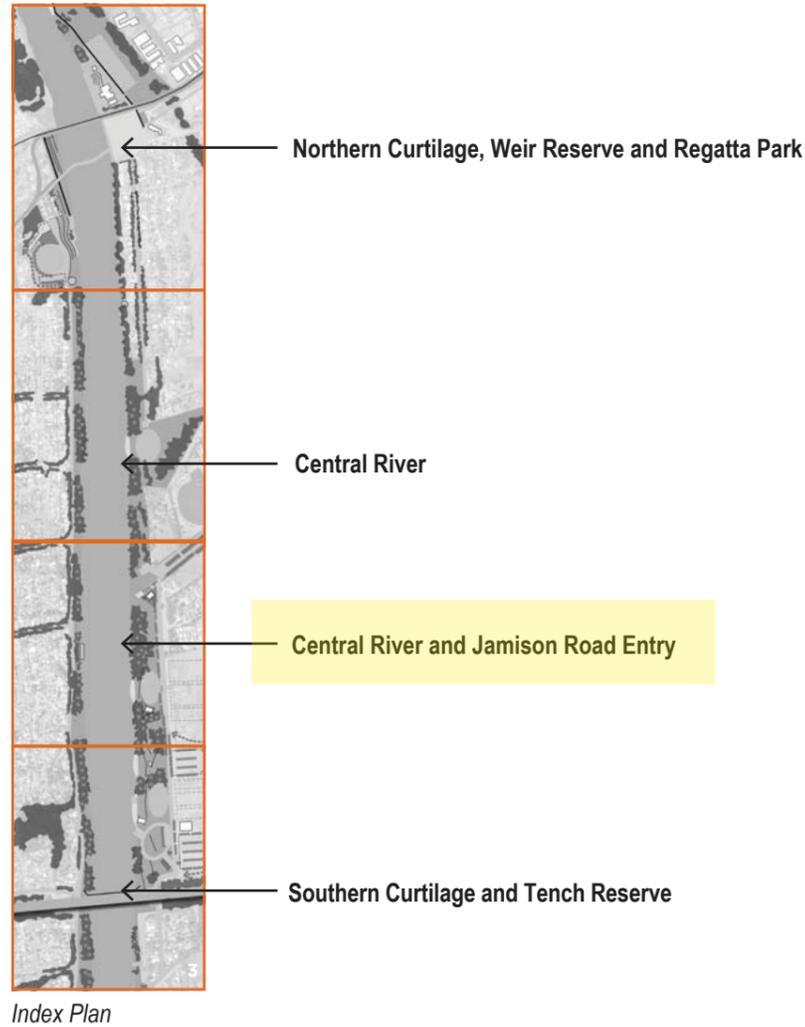
#### Response

It is important that pedestrian activity be kept away from the Jamison / Tench intersection, preferably on the northern side of Jamison Road where the current pedestrian and cycleway is located. Any activity at the western end of the building on that site would have to be carefully managed in its relationship to the walkway on the eastern side of the footpath along Tench Avenue. Consideration will also have to be given to a pedestrian crossing further up Tench Avenue, unless a set of traffic lights are eventually installed at the intersection, depending upon traffic flows in the future.

-  **Improve the ability to get to the river**
  - Improve access and parking at the top of the river
  - Improve accessibility from the top of the riverbank to water edge
  - Provide a path network, linking where possible, from the river into the city
  - Extend the range and number of access points along the river.
-  **Provide a range of continuous pathway loops**
  - Provide continuous pathway links around the river and link loops to other destinations
  - Allow for a diverse range of users such as cyclists, pedestrians and people with varying abilities
  - Minimise pedestrian / vehicle conflict
  - Encourage cycle access to and along the river bank.
-  **Create a strong sense of arrival**
  - Improve gateway destinations to the river and enhance view corridors on approach to the Nepean River
  - Improve arrival roads with avenue planting.
-  **Connect to the city**
  - Provide a continuous safe pathway for all user between the city and Tench Reserve
  - Ensure sound orientation through a restrained and coordinated suite of directional signage.

-  **Enhance views and vistas**
  - Provide views to open water;
  - Enhance existing views and promote effective use of spaces
  - Facilitate access and areas for casual spectator vantage points for river based events
  - Reinstate views, ensuring a visual definition along the river bank.
-  **Festivals And Events**
  - Consolidate effective festival and event spaces, taking into consideration landform, proximity to users and surrounding demographic, facilities and access (transport and parking).
-  **Cultural And Arts**
  - Built on existing cultural sites and integrate into the wider context.
-  **Recreational**
  - Provide a range of activities on and around the river.
-  **Historical**
  - Protect and conserve historic, architecturally significant sites.
-  **Active**
  - Maintain a range of sporting opportunities.
-  **Educational**
  - Locate education opportunities in safe and easily accessible areas.
-  **Engaging Aboriginal people**
  - Identify opportunities for training, mentorship and employment
  - Identify opportunities to reflect Aboriginal culture and contemporary priorities.
-  **Build upon the cultural european heritage of the river**
  - Protect historic and architecturally significant sites.
-  **Identify opportunities for story telling**
  - Develop a series of interpretive loop walks that tell the story of the river
  - Expand upon existing interpretation of the river through various multi media

### 3.4 our river concept masterplan - jamison road entry



page 57 'our river' master plan report

The concept master plan for the Jamison Road Entry to the Nepean River and the Southern Curtilage and Tench Reserve.

**Response**

The impact of the building on the corner can be minimized in its relationship to the river. The proposal is for no change in the building height at that point. It will maintain an 8.5 metre height, equivalent to a larger scale two-storey building with high internal ceiling heights.



page 64 'our river' master plan report

**central river and jamison road entry**

The Central River section of the project site also has steep banks and limited water's edge access. Access to the water will happen at a range of scales and provides opportunities to get down to and onto the water by platforms, jetties and ramps. Views to the river along the Jamison Road are currently blocked by dense tree canopies. The concept master plan proposes a plaza space at the western end of Jamison Road as an arrival and introduction to the river for visitors.

**Response:**

"Our River" masterplan identifies the need to provide access down to the river, but this diagram also illustrates the possibilities for a visual link between the end of Jamison Road (proposed building site) and the Penrith District art gallery on the opposite bank in Emu Plains. The gallery is a low formed building which has a single visual access over the river and is approximately the same height as the current proposal for building on the corner of Tench and Jamison.

- 19 Viewing deck, small installation space, and water access at Lewers Gallery
- 20 Upgrade playground with new walls and terraces
- 21 Proposed future recreation, event, tourism support space
- 22 Explore the possible realignment of Tench Avenue and potential connection to Blaikie Road
- 23 Explore paved boulevard for pedestrians
- 24 Proposed expansion of tourism / recreation facilities with car parking
- 25 River tour platform/jetty



page 70 'our river' master plan report

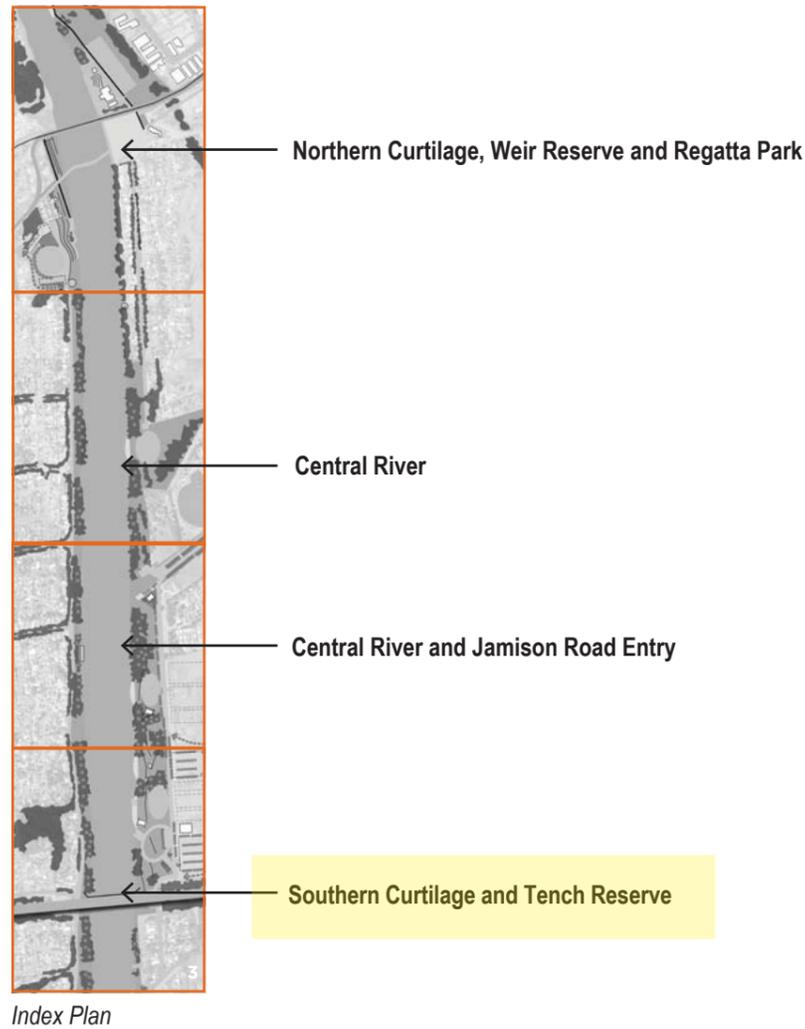
**key destinations - jamison road entry**

With a clear view to the Nepean River, the end of Jamison Road becomes an entry into Tench Reserve creating a strong sense of arrival with a plaza space and lookout.

**Key Proposals:**

- Provide a strong sense of arrival along Jamison Road
- Extend parking opportunities along Jamison Road
- Create a water vista at the location where Jamison Road turns in to Tench Avenue with cantilevered lookout
- Provide a key activity area with a range of uses, such as playspaces, decks, shade, adjoining kick around spaces, along with a paved area for temporary uses (stalls, art installations, pop up activities etc).

### 3.4 our river concept masterplan - tench reserve



page 57 'our river' master plan report

The concept master plan for the Jamison Road Entry to the Nepean River and the Southern Curtilage and Tench Reserve.

**Response**

It can be noted from the existing arrangement how the height of the existing trees, let alone future growth, provides a good screen to buildings at 8.5 to 10 metres in height. This could be clearly seen in the vista across the Nepean River to the Penrith art gallery.



page 65 'our river' master plan report

**southern curtilage and tench reserve**

The Southern curtilage main activity hub is focused on Tench Reserve. The concept master plan looks to expand Tench reserve into a recreation and tourism precinct, improving circulation and parking and reducing user conflicts. Proposals include the possible realignment of Tench Avenue to improve the pedestrian environment and connection to the river, with an upgrade to the existing boat ramp and launch/wash down and associated parking area to improve launching efficiency and safety as well as visitor amenity

**Response**

The diagrams and sketch drawings of the landscape show the possibilities for shelter under shaded structures on the opposite side of Tench Avenue. The proposed building will be low in scale and may also have outdoor areas associated with a café/food and beverage outlet providing indoor dining and takeaway food, which may be consumed at that point where the opening to the river is greatest.

**LEGEND**

- Our Accessible River**  
Improve the ability to get to the river  
Provide a range of continuous pathway loops  
Create a strong sense of arrival  
Connect to the city
- Our Active River**  
Provide a range of facilities and attractions
- Our Cultural River**  
Enhance views and vistas to and from the river
- Our Healthy River**  
Reinforce native vegetation link from river through creeks and streets  
Provide filtered views through to the river and open views at street ends
- Our Managed River**  
Manage and maintain the bank's water edge infrastructure  
Manage and maintain water course for water levels and quality
- Pedestrian and bicycle pathways
- Water edge access point



page 72 'our river' master plan report

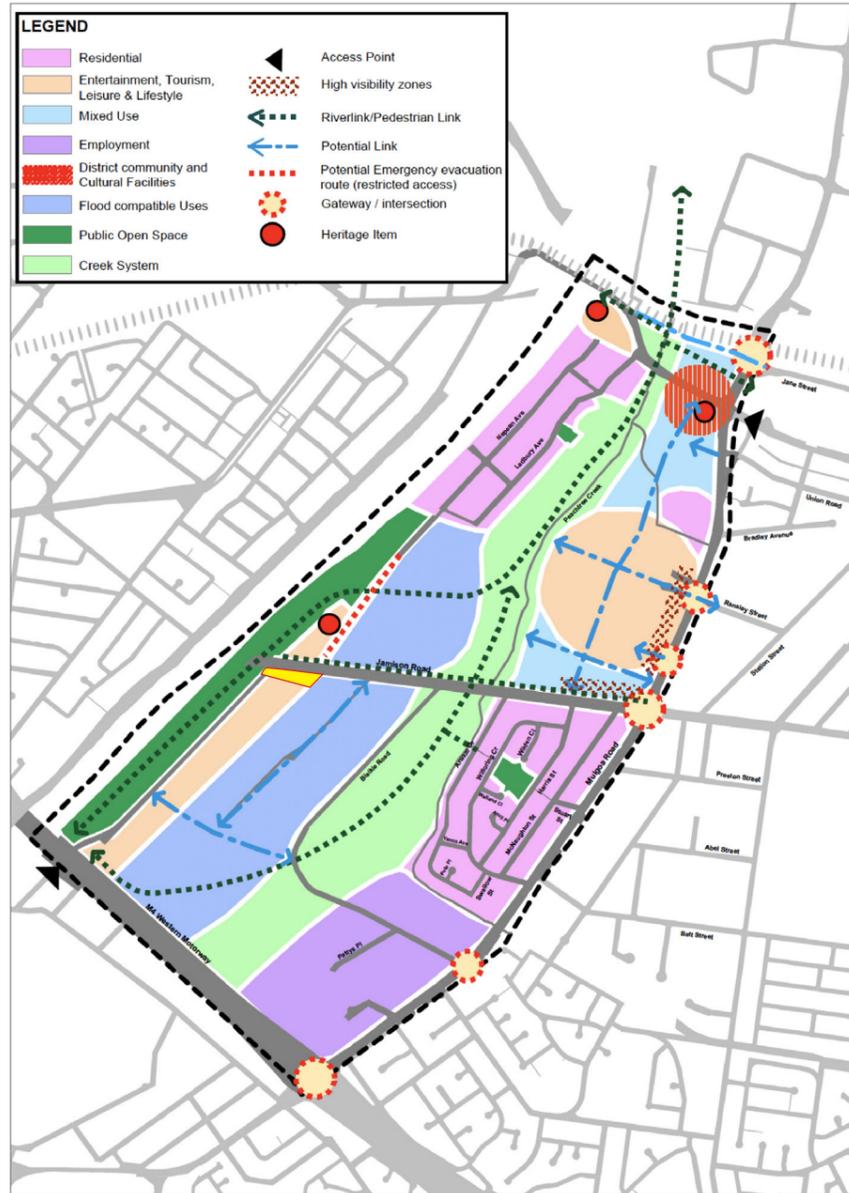
**tench reserve**

Tench Reserve will provide for a range of non-programmed events, BBQ's, boats, picnics, play, fitness, walking and cycling paths, building on its already popular framework.

**Key Proposals:**

- Improve vehicle circulation and parking
- Reduce user conflicts especially between powered and non-powered craft
- Enhance boat launching and associated trailer parking
- Expand recreation and tourism precinct including for upgraded play, cycling, walking, picnic and BBQ and eateries
- Improve universal access to the water's edge and pontoons
- Open views to the river.

### 3.6 riverlink precinct plan



Riverlink Precinct Plan 2008 - Penrith City Council

The strategic direction identified for the Riverlink Precinct in the Riverlink Precinct Plan is reflected in the SP3 Tourist zone of the site which applies pursuant to the Penrith Local Environmental Plan 2010 (LEP 2010). The provisions for the Riverlink Precinct in Part E13 of the Penrith Development Control Plan 2014 support the zoning of the site and implement the direction of the Riverlink Precinct Plan 2008.

The planning of the Riverlink Precinct presents an excellent opportunity to employ precinct wide design principles.



The key principles are:

- Creating a cohesive and well-connected precinct.
- Enhancing and activating Mulgoa Road as a significant approach to Penrith City Centre.
- Reinforcing key intersections as gateways to the Precinct and the Penrith City Centre.
- Creating a clear and legible public domain framework of streets and open space.
- Creating a new local north-south access link between Jamison Road and the Great Western Highway.
- Extending Ransley Street west through the Panthers site, connecting to the open space corridor.
- Creating an exciting core of entertainment, leisure and lifestyle uses around the existing club.
- Incorporating sustainability best practice.
- Connecting Riverlink pathways with the Great River Walk.
- Encouraging views of the Blue Mountains from the public domain.
- Encouraging design excellence.
- Improving connectivity through the Precinct.
- Enhancing Peach Tree Creek.

**Response:**

The proposal is consistent with the objectives and key principles.

The 'Winter Sports World' falls under the definition of an 'recreation facility (indoor)' and includes 'tourist and visitor accommodation', 'food and drink premises' and a 'function centre'. These uses are permitted with consent in the SP3 zone.

3.7 nepean river green bridge reports (RMS + NGH) - future river walk



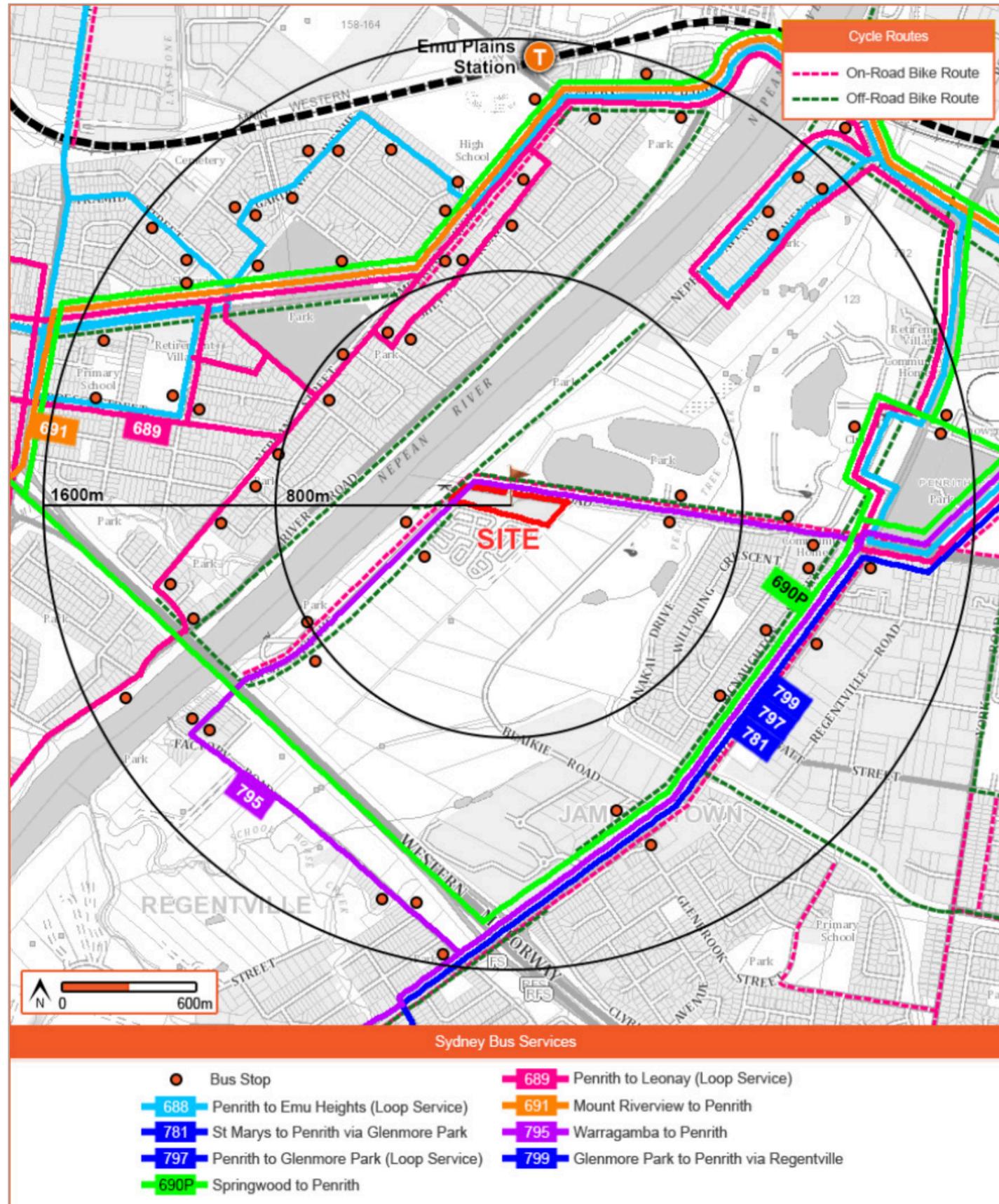
NGH Environmental - Nepean River Green Bridge Review of Environmental Factors page 2 - Figure 1-1 Location of the proposed Nepean River Green Bridge (indicated in red) and surrounding locality and facilities, including existing and future paths of the Great River Walk (Ki Studios 2014)

- |                                     |  |                          |  |
|-------------------------------------|--|--------------------------|--|
| <b>PLACES OF INTEREST</b>           |  | <b>LEGEND</b>            |  |
| 01 Penrith Weir                     | 07 Memory Walk                                   | 🏠 Accommodation          | 🍽️ Restaurant                              |
| 02 Museum of Fire                   | 08 Waterski Park                                 | 🚤 Boat Ramp              | 🍷 Picnic & BBQ                             |
| 03 Nepean Rowing Club               | 09 Penrith Regional Gallery & The Lewers Bequest | 🚌 Bus                    | 🔭 Lookout                                  |
| 04 Victoria Bridge                  | 10 Nepean Belle Paddlewheeler                    | 🚆 Train                  | 🎡 Playground                               |
| 05 Explorers Memorial               |  | 🅅 Parking                | 🪜 Stairs                                   |
| 06 The Arms of Australia Inn Museum |  | ☕ Cafe                   | ♿ Accessible Toilets                       |
|                                     |  | 🚻 Toilets                | ⚠️ Path may be closed in high water events |
|                                     |  | ✳️ Main Entry Point      |  |
|                                     |  | ⋯ Existing Sealed Path   |  |
|                                     |  | ⋯ Existing Unsealed Path |  |
|                                     |  | ⋯ Proposed Sealed Path   |  |

**Response:**

We note that the intended path along the riverbank is on the opposite side of Tench Avenue from the site. Further, not shown on this diagram is the walkway / cycleway on the north side of Jamison Road which connects path shown in this diagram.

3.8 connectivity + infrastructure



Response:

The site is well served by public transport and there are already pedestrian / cycleways that connect from Mulgoa Road to the Nepean River.

pdcc traffic report - figure 3 active transport services

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## 4.0 concept design response

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## 4.1 building program (brief)



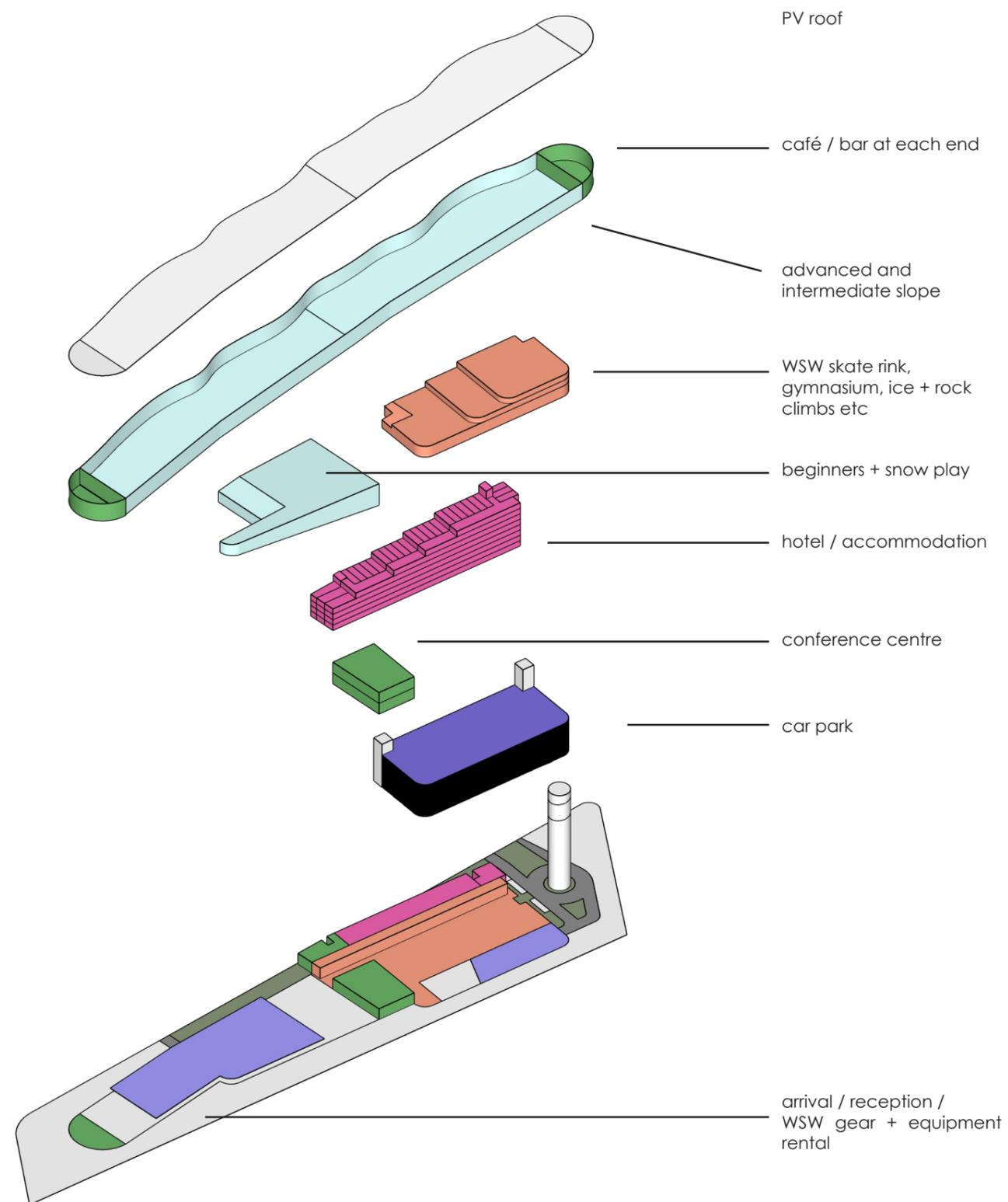
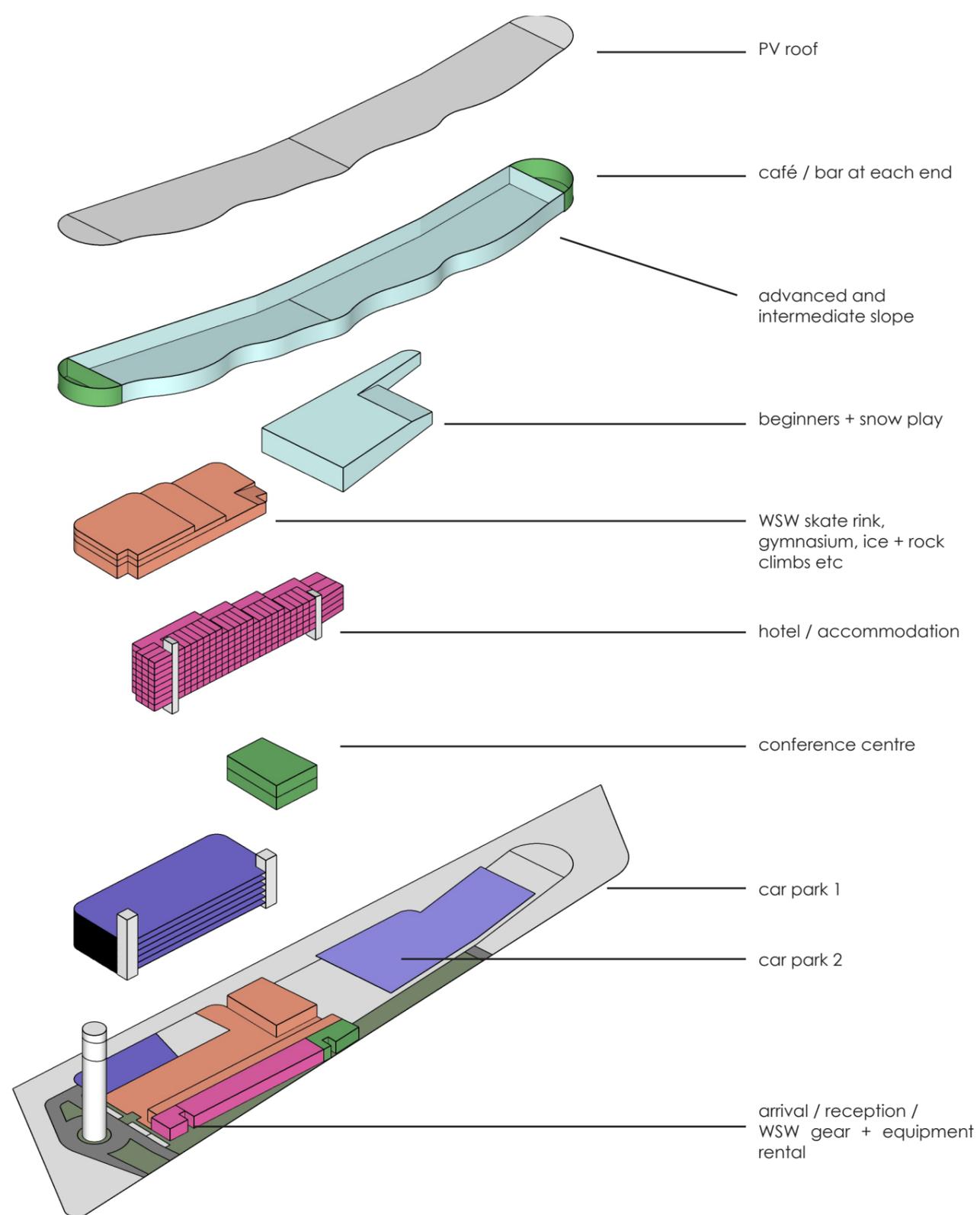
The proposal is for a "Winter Sports World" which is a complex that provides a year-round experience for a variety of winter sports activities, for both locals and tourists, particularly those planning a trip west to the Blue Mountains, together with associated facilities including a 4-5 star Hotel with Conference, food and beverage facilities.

The WSW centre hosts a number of winter-related activities:

- indoor down-hill skiing on a 300-meter-long slope (intermediate to advanced)
- ski training for beginners of an 80-meter-long slope
- snow play for children and novices (slides on toboggans and tubes, snow sculpture etc)
- ice skating rink: general, racing and dancing
- ice and rock climbing
- winter fitness / gymnasium and altitude training

These are served by a reception area, gear rental and sales area, gear repairs and maintenance and general admin.

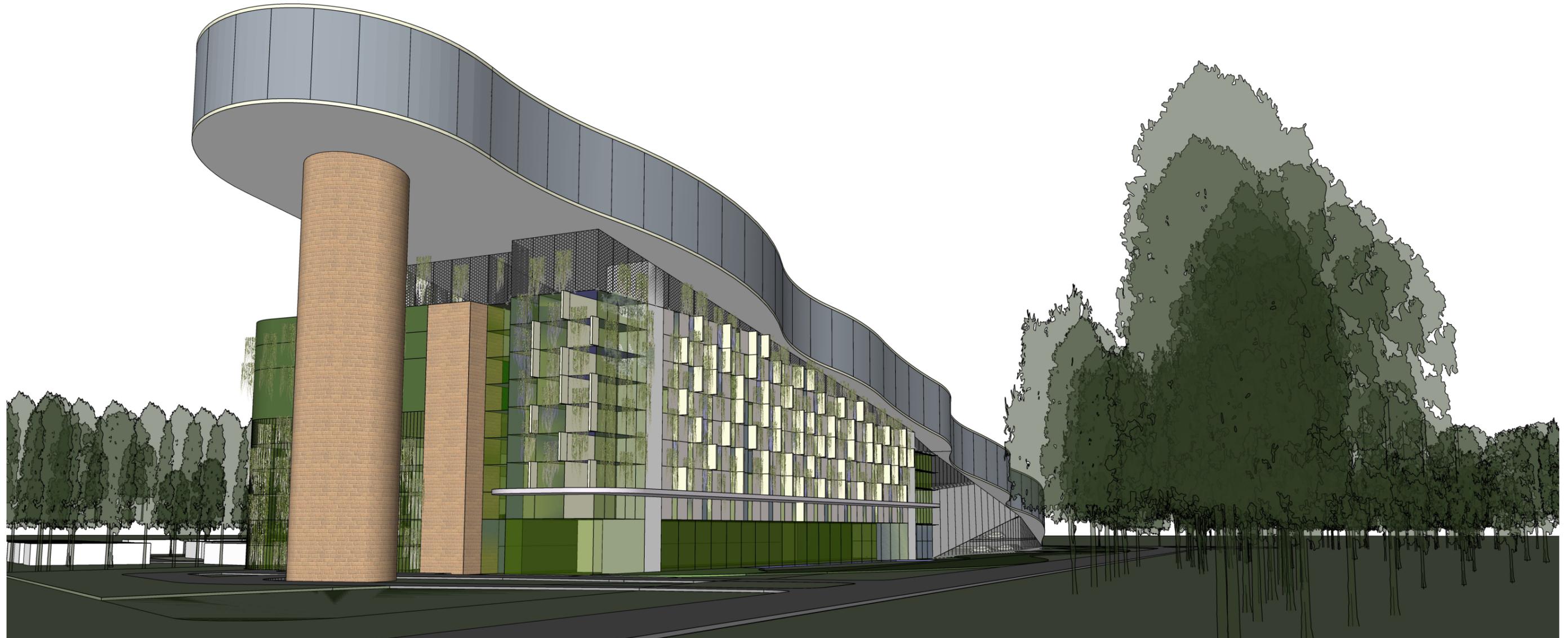
## 4.2 concept design



The building takes the form of an elongated wedge. The main long ski run is placed as a 'roof' of the complex, highest in the east and sloping west down towards the river. All the WSW activities and hotel are grouped under the taller end of the building. The main entry is in an open area around a 'round tower' that supports the highest end of the ski slope. The entry foyer leads to an open 'internal street' between the hotel on the north and the WSW on the south.

The east end has the hotel facing north (above the reception area on one side of the 'internal street'). The co-located conference area is at the west end of the hotel with a view into the snow play area. The south side has the main guest carpark, with the wide span WSW activities of skating rink and ice climbing above. The WSW reception and equipment area leads directly to the WSW area above.

## 4.3 building envelope + built form



view from the north east at ground level showing the possible built forms

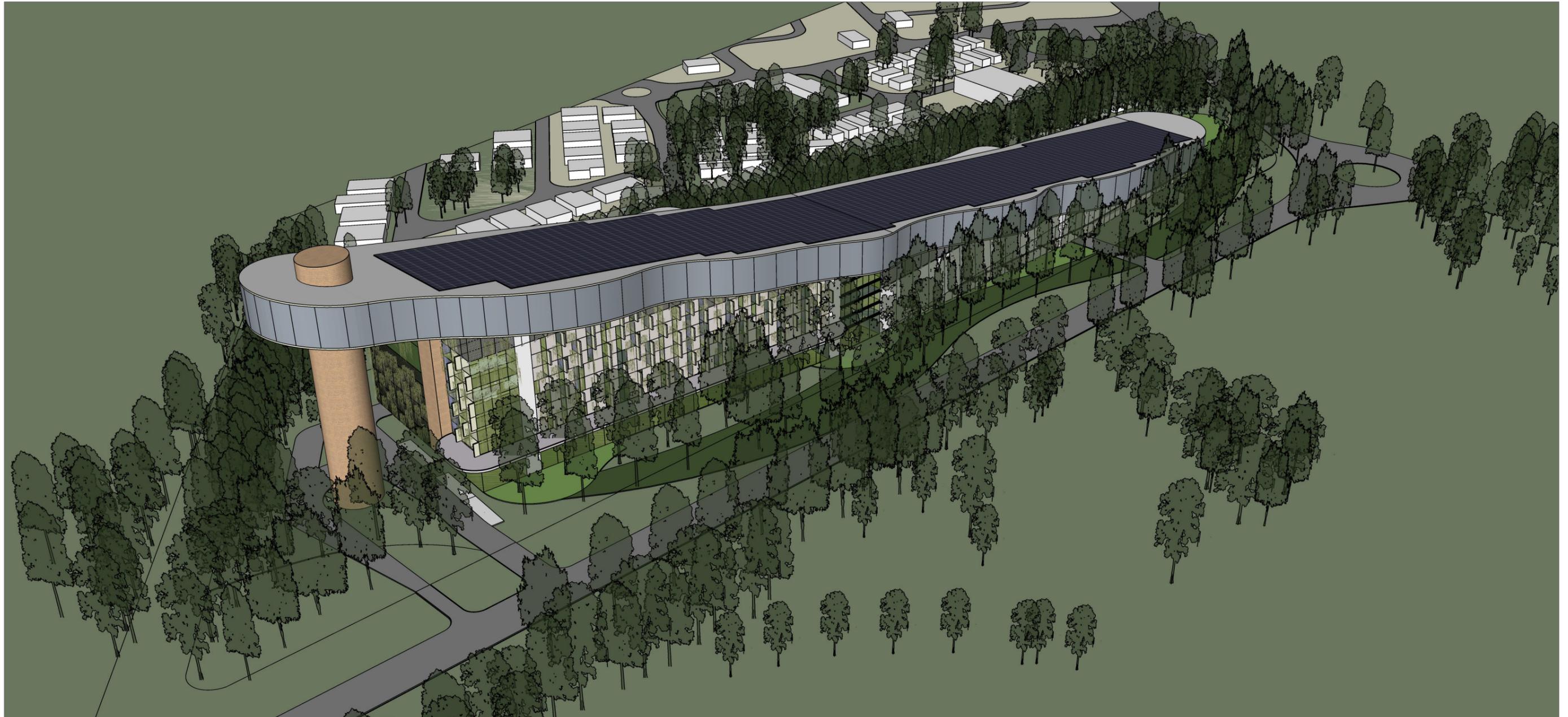
The proposed building for Winter Sports World is comprised of three visual components – the first is a ski slope that rises from 8.5 metres at the river end to 54 metres at the eastern end on the corner of Jamison Rd and the unmade road of Wilson Lane. The second component is a building underneath that triangle that faces north and looks out over Jamison Rd. This building is comprised of a 172 room hotel and a number of conference and food and beverage facilities associated to the hotel. The third component is a service area behind the hotel, facing south, comprising a carpark area, above which is the internal components for Winter Sports World, principally ice-climbing, ice hockey on a skating rink and other associated changing facilities etc.

The form of each of these three parts is made distinct by its shape and by its materials and finishes.

The eastern end of the building is the porte-cochere, entry and foyer spaces leading into both the Winter Sports World and the hotel. This is the “apex” of the building and rises to a maximum height of 54 metres above the common ground level. The bulk of this part of the building, equivalent to a 15-16 storey building, is deconstructed in its massing and reduced in its overall form by placing a round cylinder containing a lift, fire stairs and some services that holds up the end of the ski slope, which is cantilevered out over that space. The hotel and Winter Sports World is thus pushed back towards the west and the form is disguised. The formal massing is reduced in visual volume by having a space between this tower to the apex and the building itself. This formal reduction in size and form at the eastern end is important to provide a signal that the building is firstly an unusual usage, similar to sporting facilities, and not at all a singular box-like structure as may be found in a central business district (CBD).

This third part of the building (the car park and Winter Sports World) is lower than the remaining portions of the building, located at the “rear” of the building facing south and hidden from view from all the public areas around the building. The overall height of these areas is restricted to 38 metres above the current ground level. Given the nature of the internal qualities of the spaces, there is little need for windows or natural light. This reduces the possible loss of privacy to the adjacent site, which is a mobile home village. Further, directing natural light to this part of the building would be principally through sky lights, which would simulate an open sky. Allowing natural light where required in changerooms etc. would, of course, be treated with highly translucent filmed windows.

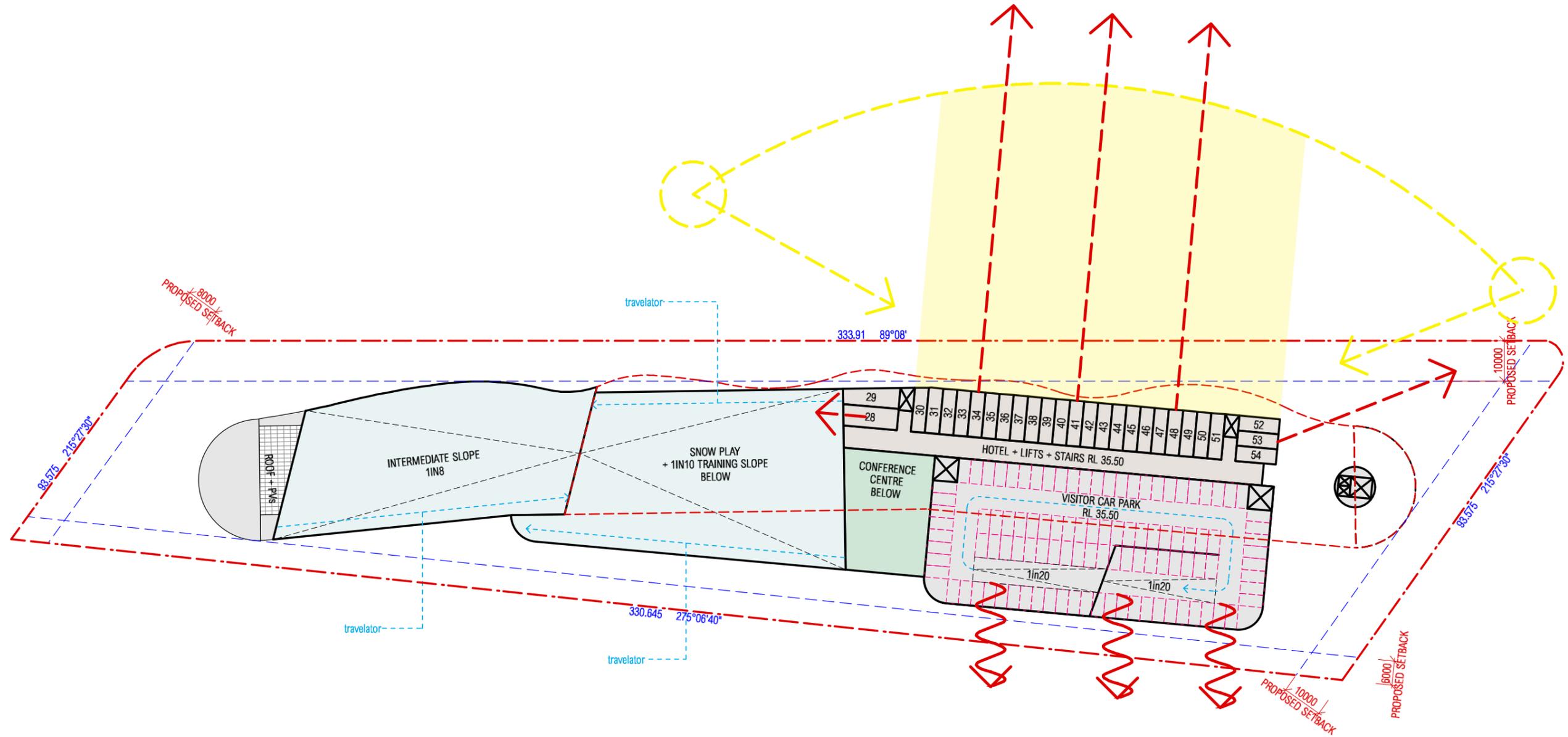
## 4.4 bulk and scale



birdseye view

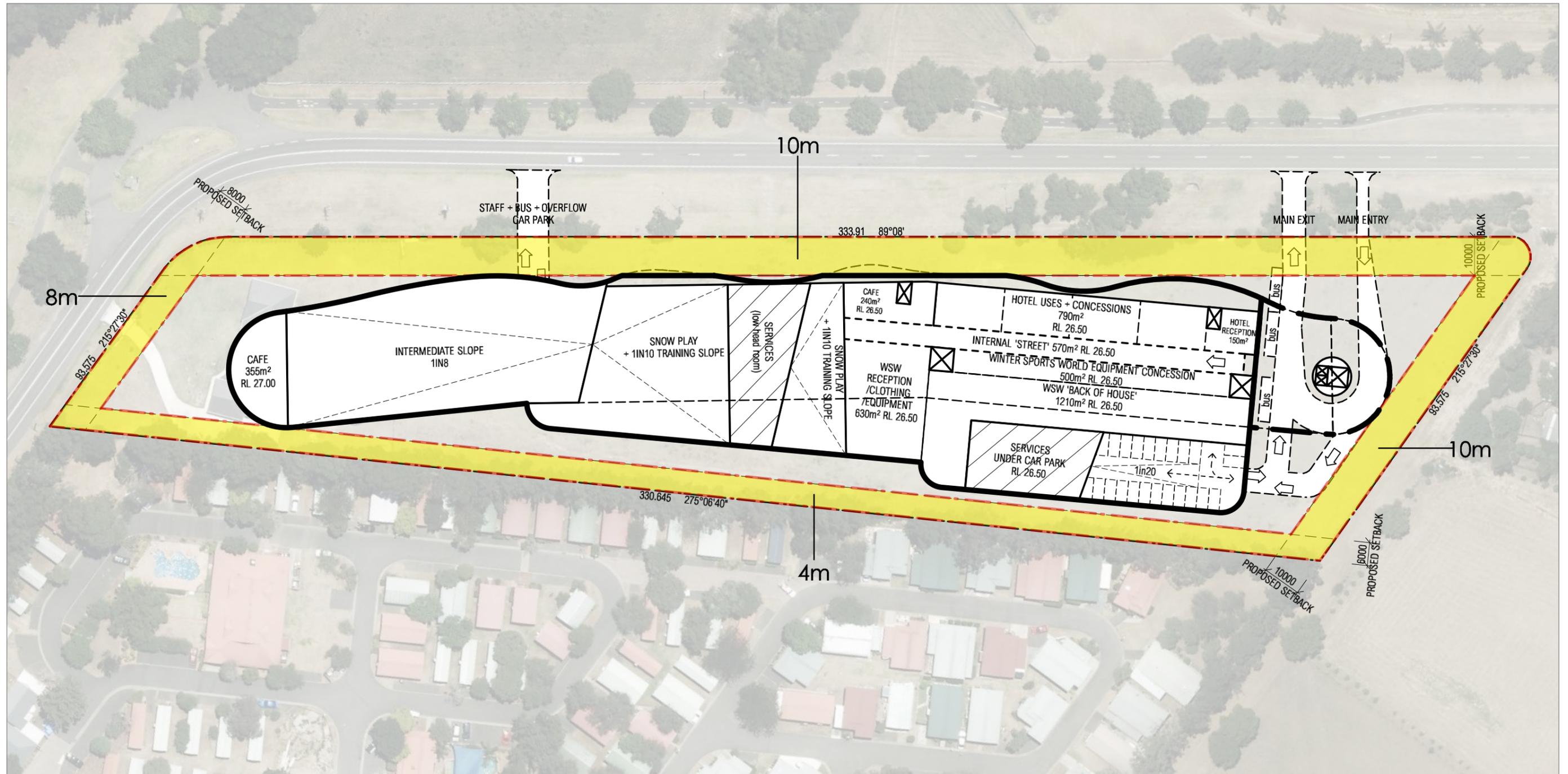
The building is scaled in response to the site: the lower end is located close to the river, and is below the 8.5 m height limit, surrounded by trees. The building slopes upwards to the east with the highest end above the entry 'porte-cochere' and foyer. The largest bulk of the hotel is located on the north side (facing out to the view), with the carpark and WSW behind and lower to reduce overshadowing to the site to the south. The entry area is open around a 'tower' that supports the highest point of the main ski slope.

## 4.5 orientation + solar access



The site has its long axis running East to West. This has the advantage of providing a large area for all 172 rooms of the hotel to face north, but the narrow site presents an issue for overshadowing of the adjacent site to the south. This is alleviated by reducing the scale of southern side of the building and locating the highest part to the far east so as to shade Wilsons Lane. The long axis also provides a roof area facing north with solar PV cells to assist in making the building carbon neutral.

4.6 setbacks and alignments

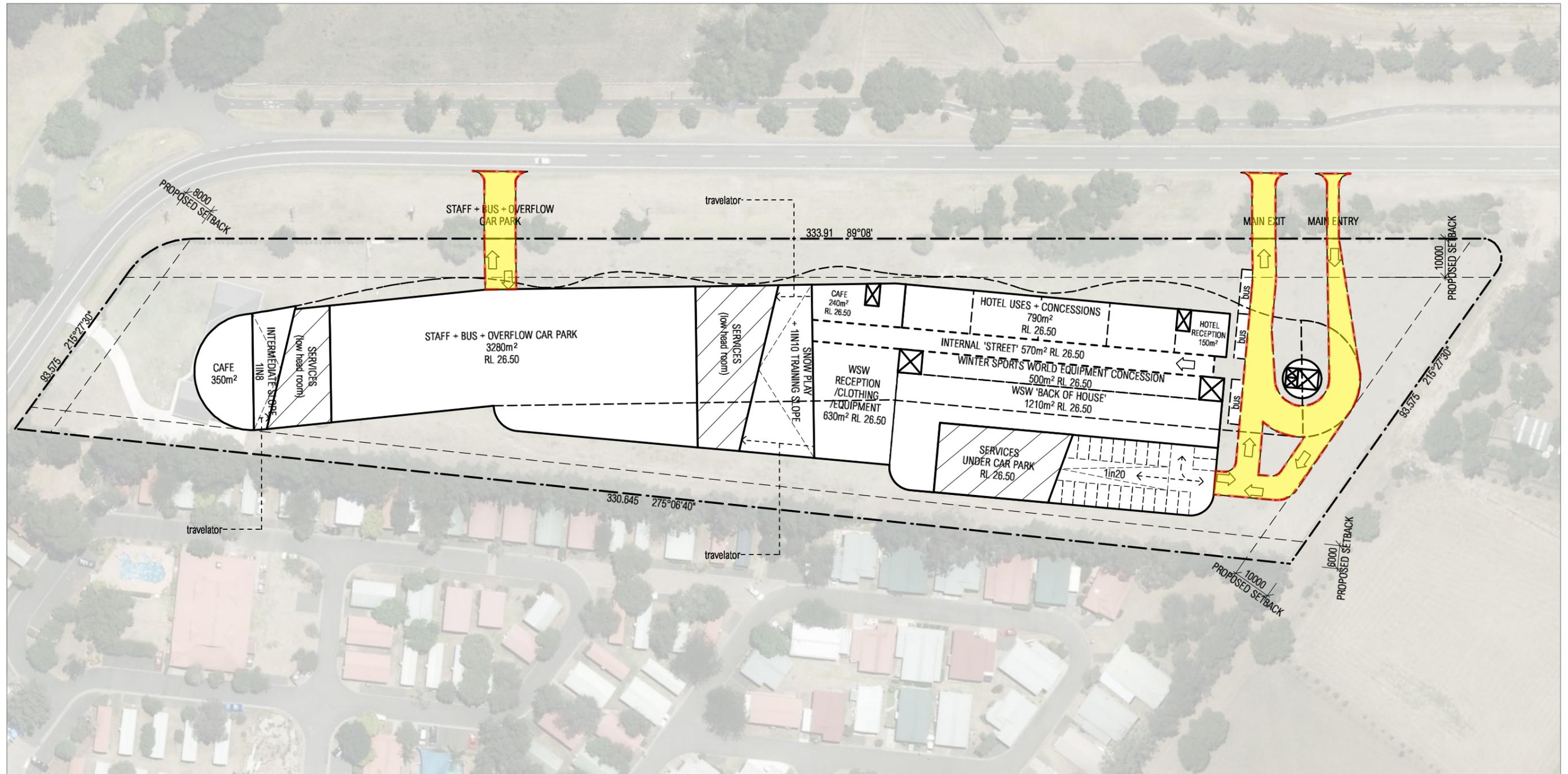


plan - setbacks

The setbacks for the building follow those set out in the DCP: 8 m to Tench Avenue and 10 m to Jamison Road. The setback to the unmade Wilsons Lane is 8 m (as for Tench Avenue) and the rear boundary is set a minimum of 6 m off the boundary, which is lined with trees (approx 20 metres high) in front of the mobile home village.

This allows for a wide curtilage along Jamison road, with a double row of trees (see landscape report) and allows for Jamison Road to be widened to 4 lanes whilst retaining the landscape. The tallest part of the building, particular the round tower, is setback from all boundaries, providing an open area at the point of entry.

## 4.7 access, circulation, safety, and security



pedestrian and vehicular access

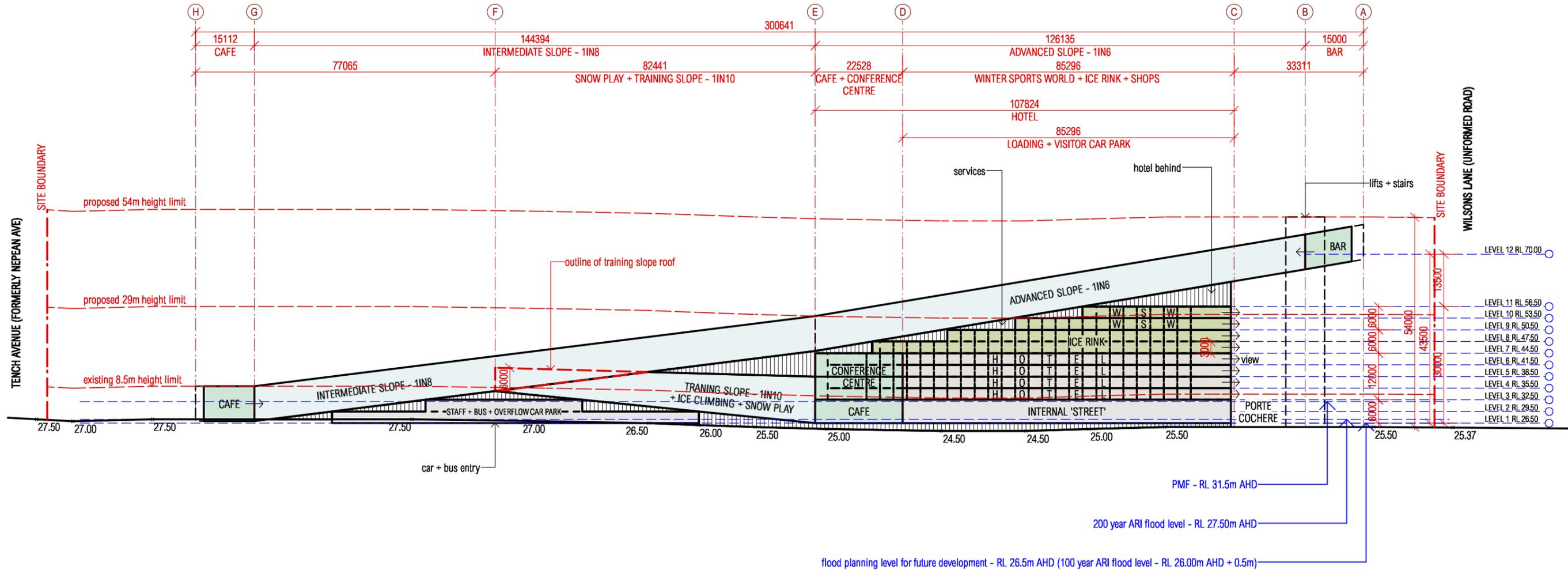
Access to the site has been designed to be at the intersection of Jamison Road and the unmade Wilson Lane. Vehicle access to the site and to the porte-cochere and the car parking would be achieved from Jamison Road near this point, or preferably, directly from Wilson Lane if the lane is upgraded to a made road. Cars and buses have access directly to the front entry of the building at this eastern end with a drop-off point and the ability to rotate into an above-ground car park, the ground level of which is above the flood level on the site. There is a four-level car parking behind the building for visitors' cars. The pedestrian access will also follow the porte-cochere arrangement. There is a separate access further along to the west along Jamison Road for staff car parking and similar uses and loading. This would be a smaller access point

further screened from the street and only used by workers and staff connected to the building who would know of a secondary entrance.

Along the length of the site on Jamison Road, there is a proposal for street trees and trees on the subject site, to be planted to continue the avenue of trees as indicated in the current DCP. For the length of this building it is proposed that the trees have a sinuous planting arrangement in plan, further reinforcing the sinuous nature of the upper level of the building and reflecting the idea of ski trails where the curvilinear nature of descending over snow creates a series of sinuous paths.

There are two entrances: the main area is at the east, under the 'round tower' leading to a 'porte-cochere' and the carpark entry behind. The drop-off area leads directly to the foyer end on an 'internal street' that serves both the hotel and the WSW. The carpark at the east is intended for hotel and WSW guests, with easy access for patrons into the 'internal street', and access for valet parking. This also leads to the loading docks for the WSW and hotel. The second entry leads to the staff carpark, a guest overflow carpark and bus carparking. This has an internal pedestrian connection to the 'internal street'.

### 4.8 flooding



The site is relatively flat, with a depression in the centre that allows Peach Tree Creek to drain across the site and along down into the Nepean River during extreme flood events. This may cause flooding at 1:100-year flood levels, which is covered in a flood report included with the Planning Proposal.

The built-form response is to lift the entire building to a level at 0.5m above the 1:100-year flood level and to retain the existing topography as existing in order to minimise any resistance to future flood flows across the site. There is no basement areas, and there is a clear path for flood waters across the centre part of the building (with no access in or out of the building at that point). The entry area at the east and the café/restaurant area at the west are both on levels above the 1:100 year flood with assists on at gradient access to the building.

## 4.9 character and colour



The character of the building makes a reference to snow / ice in two ways: the form of the main ski slope has a wavy form mirroring the slalom patterns carved by skiers, and the colours of the main slope is taken from the reflections in deep ice: pale blue on the upper parts that grade into a softer and darker green on the lower parts, including the hotel. The roof area, being PV solar panels for almost the entire area, reads as dark blue and is deeply recessive when seen from Emu Plains on the other side of the river and the distant Blue Mountains.

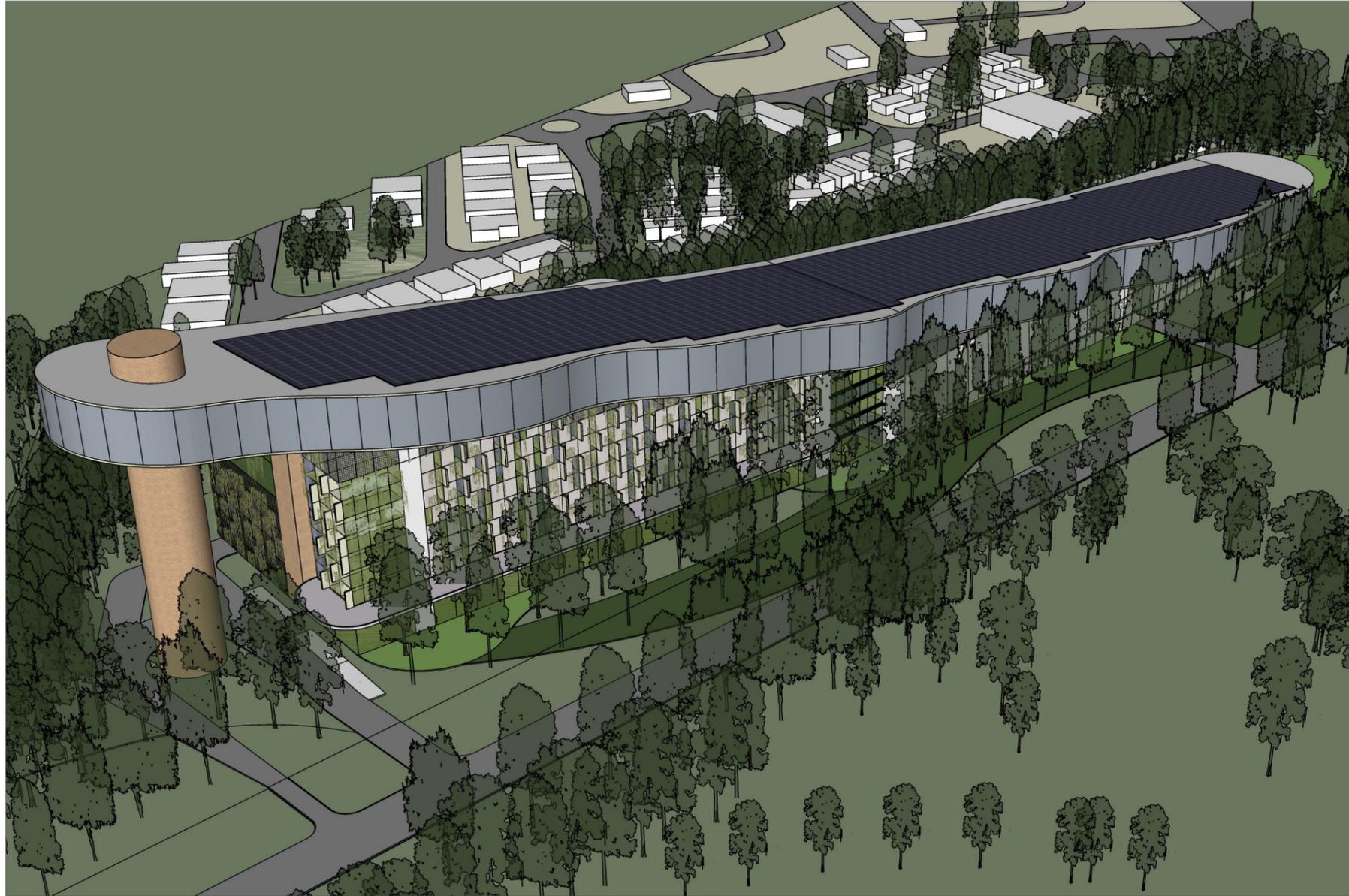


This also allows the use of materials to provide a connection to its location by cladding the tower to the apex in sandstone with few openings to provide a rough, rugged surface over that material and providing a strong visual form as a symbol of the building, obviating the need for any cross signage at that point. The building is the symbol of the slope and the only intrusive signage would be at the ground level indicating access for pedestrians, cars, buses etc.



The eastern face, together with the northern façade of the hotel, are treated as previously described climbing plants on vertical trellises that allow for windows looking out the north and east but providing a softening both in a visual and haptic sense to the built form and reducing its impact visually underneath the ski slope.

## 4.10 sustainability



view from the north east showing PV cells on the roof and solar pannels on the walls of the ski slope and biophilic design for the walls of the hotel

The building will be carbon-neutral in operation: the winter sports areas are essentially a giant "esky", with multi-layered massive levels of insulation (and few if any windows), with a high efficiency mechanical plant making both chilled air and snow or ice). The entire operation, including the hotel, is run from a 1 MW power supply of photo-voltaic solar cells on the roof (the equivalent of 200 houses with PV panels), run through an on-site battery storage facility.

The roof of the ski slope, which descends towards the west, is covered in photovoltaic cells and traditional panels that generate at least 1.2 MW of power towards the running of all facilities within the building. The remaining section of the roof outside the panels would be painted a dark colour to assist in suppressing the form when viewed from across the river and from other vantage points where the western sloped roof can be viewed.

4.11 shadow analysis - building only



june 21, 9am



june 21, 12:00 noon



june 21, 1:30 pm



june 21, 3:00 pm

These solar shading studies show the impact of the building only, (no vegetation or trees) at the mid-winter solstice (22 June) during the day – at 3 pm. By mid-afternoons the shadow from the tallest part is cast only over Wilsons Lane, and the private open space of the last few homes.

These solar shading studies show the impact of the building (only, no vegetation or trees) at the mid-winter solstice (22 June) during the day – at 12 noon and 1.30 pm. The shadow from the building is cast only on the last 6 permanent mobile homes.

### 4.11 shadow analysis - building + landscape



june 21, 9:00 am



june 21, 12:00 noon



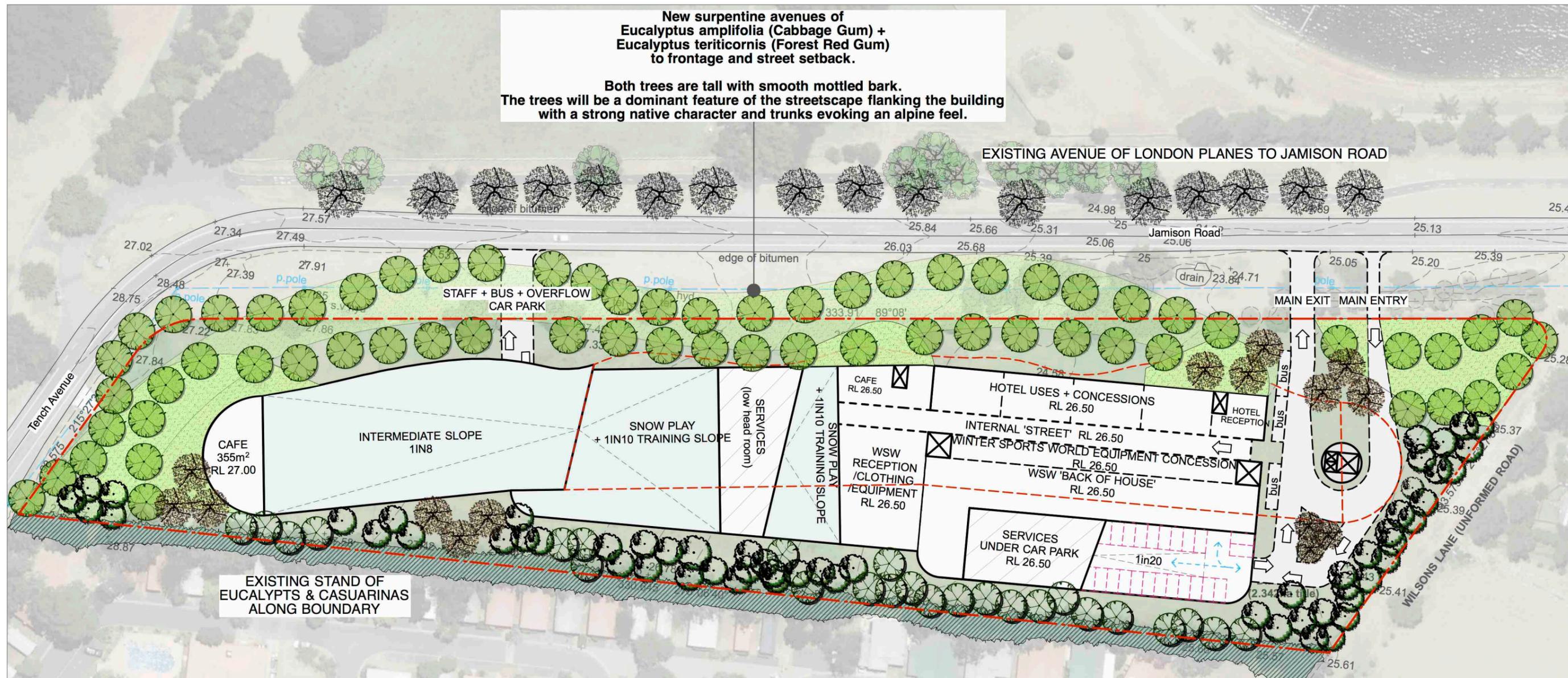
june 21, 1:30 pm



june 21, 3:00 pm

These solar shading studies show the impact of the building plus the existing trees on the neighbouring site at the mid-winter solstice (21 June) during the day. The early time shows the shadow cast by the trees is more extensive at the western end, whilst the building shades the northern side of the mobile home park.

## 4.12 landscape



The current plantings along Jamison Rd are mixed, many non-endemic species, which present poorly, particularly in comparison to the denser linear plantings along the river. The southern boundary of the site has an existing row of trees, 18-22 m in height, with trunks on the neighbouring property, but crowning over on to the site. The site itself is essentially open grassland without significant plantings.

There are 3 main landscape concepts, all incorporating indigenous riparian vegetation scaled to building.

## 4.12 landscape

**1. The Avenue**

Create a new avenue of trees on Jamison Rd. The proposal is for two parallel rows of trees, endemic Eucalypt species such as Manna Gum or Flooded Gum. Rather than the traditional linear arrangement parallel to the road, these trees would be planted in a wave formation that mirrors the slalom curves of skiers in the slopes above and adjacent. The path to the river would wind between these trees.

**2. Arrival Welcome Area**

Create a low landscape / sculpture feature at the west entry end to the building. The proposal would be for a sculptural form at the entry that could translate to the morphology of snowflake at landscape scale or alternatively give a watery effect like melted snow with a mirror finish. (Shown in the Topotek images)

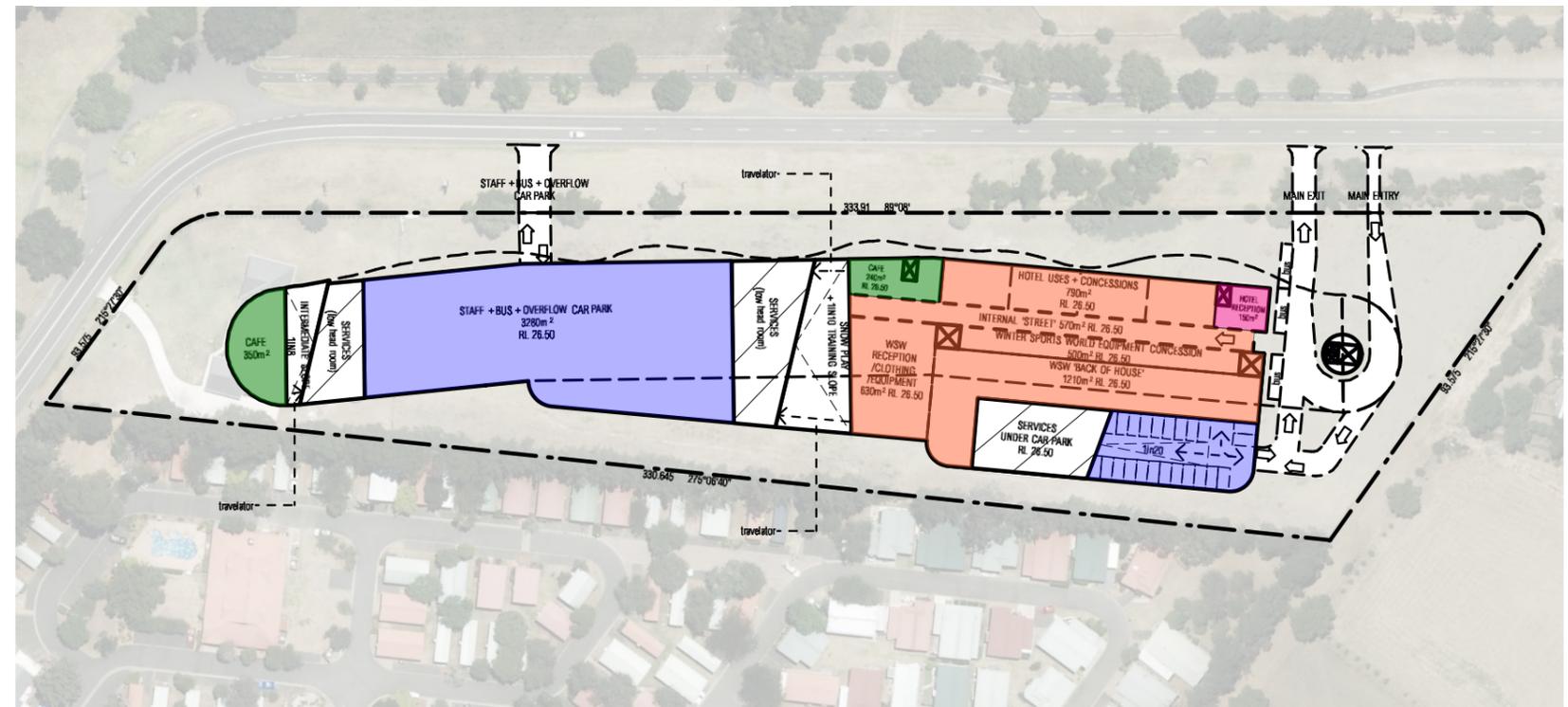
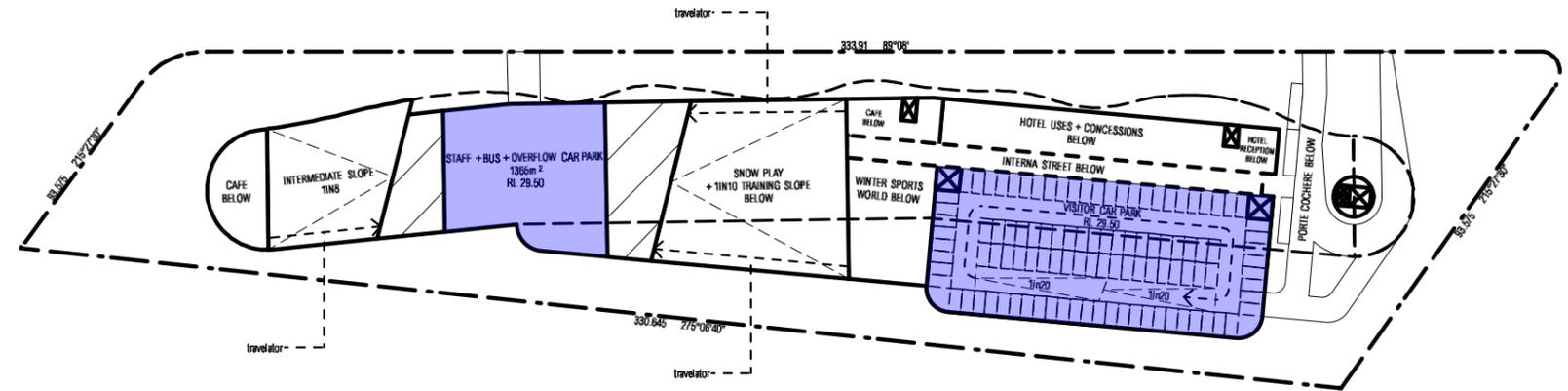
**3. River / Corner Landscape**

Create a play area / more intimate space around the café at the west end of the site. The proposal would be for the form of scribbly paths that is suggestive of a skiers' slalom run. The form would be low and present as a series of climbable / explorable elements for children. (Image from TCL)

### 4.13 internal uses + amenity related to urban design

#### Ski Facilities

There are some 25 indoor ski facilities around the world, predominantly in the US, UK and the Netherlands. Most slopes are around 200 + metres. The proposal here, for a main run at 300 m places it in the 'top ten' but is by no means the longest, which is the Alpincentre in Germany at 640 m. However, a 1.2 km indoor run is now planned for Dubai, which already has the 4th longest at 420 m. Whilst that is the main attraction, some centres also have smaller slopes (for beginners) or play areas, but few have other winter attractions. The point of difference here is to emphasise 2 additional considerations: a wide and gentle learner's slope, and a diversity of additional activities including skating, rock and ice climbing and an altitude training centre.



- BASEMENT
- CAR PARKING
- CAFE + BAR
- WINTER SPORTS WORLD
- HOTEL
- SKI RAMPS + ICE RINK
- CONFERENCE CENTRE
- LANDSCAPE AREA
- DEEP SOIL

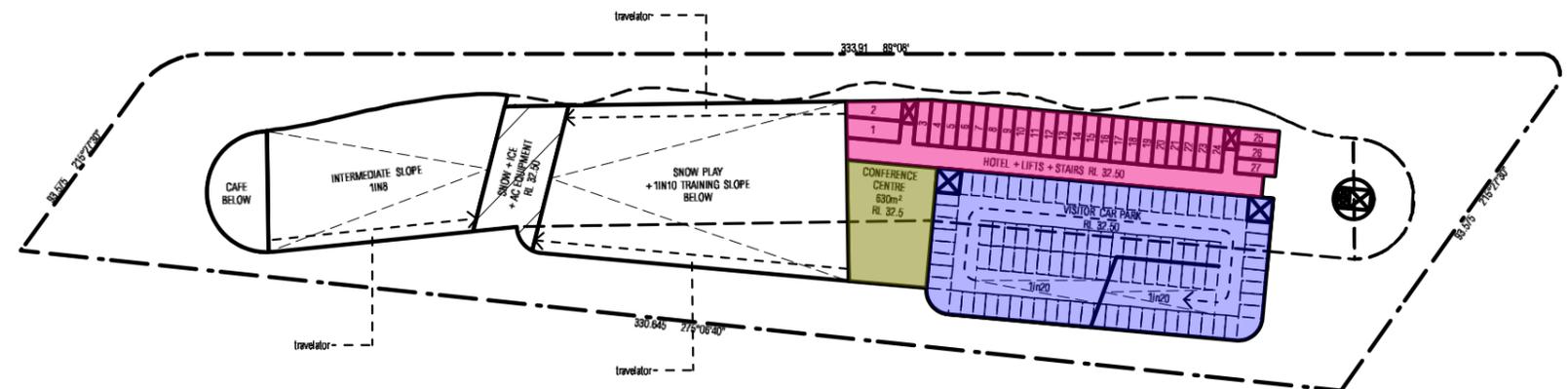
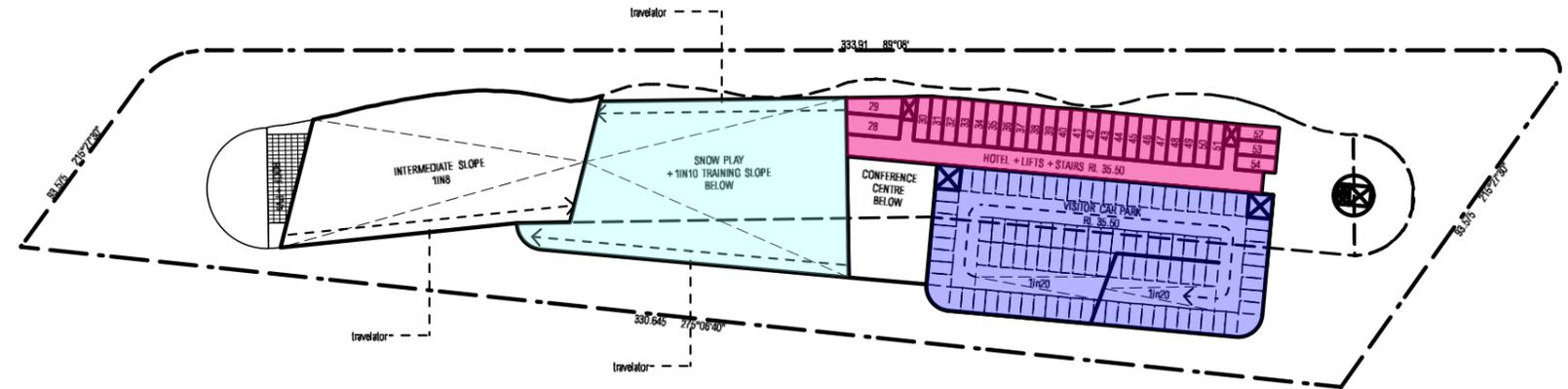
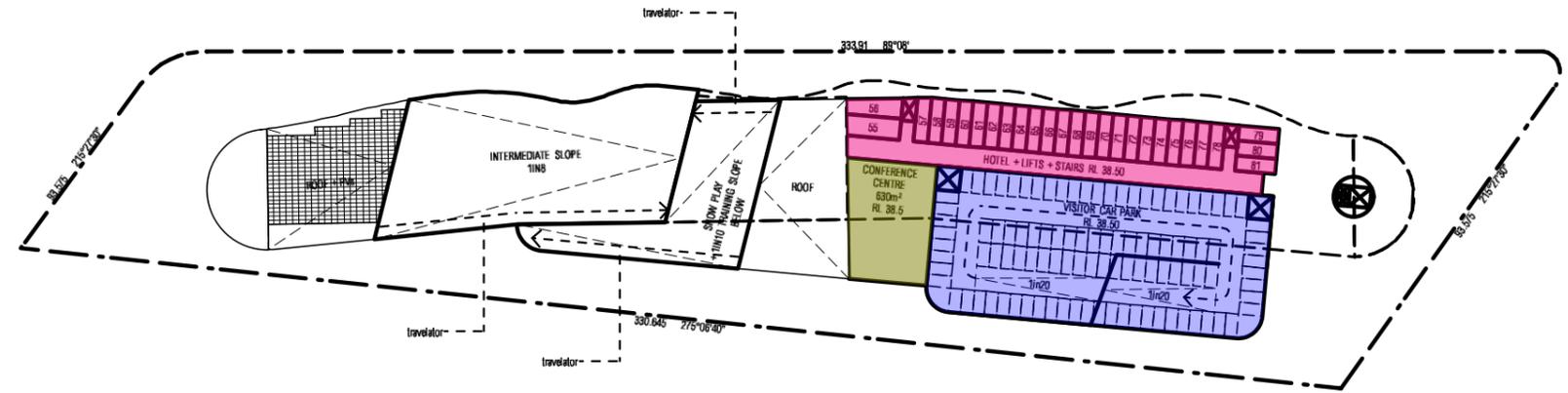
### 4.13 internal uses + amenity related to urban design

#### Hotel, Food And Beverage

As the centre is located in an area that provides few, and limited, hotel accommodation, the WSW has a 172 + room hotel, with ancillary concession areas for the hotel patrons (souvenirs, travel supplies etc). The hotel also manages the food and beverage offerings, primarily in 4 locations:

- a café at the base of the main run
- a café facing the learner's slope / play area at the end of the 'internal street'
- a restaurant within the hotel primarily for patrons (breakfast / lunch dinner)
- a bar at the top of the main slope, accessed through a dedicated externally located lift

The hotel has the usual 'servant' areas of a reception area, back of house, commercial kitchen and general admin.

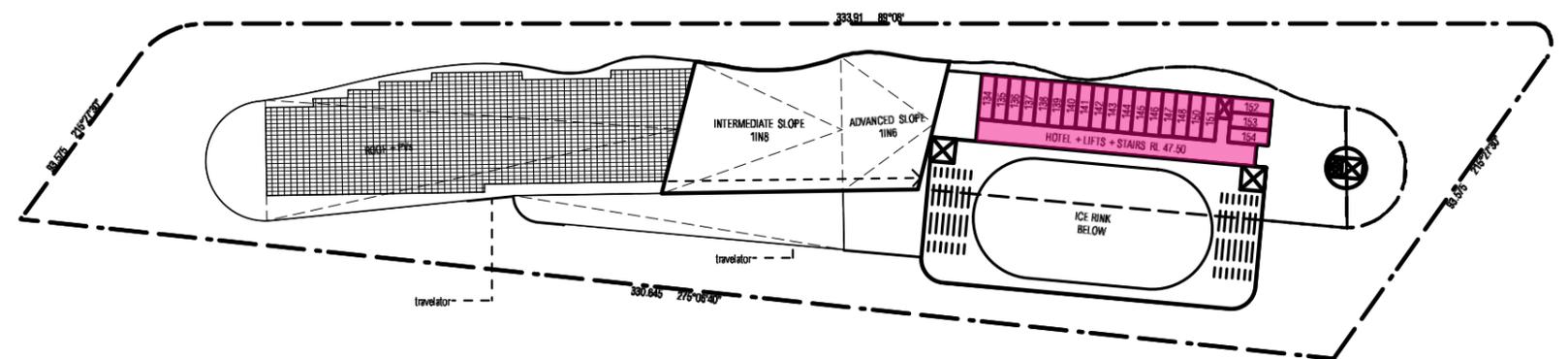
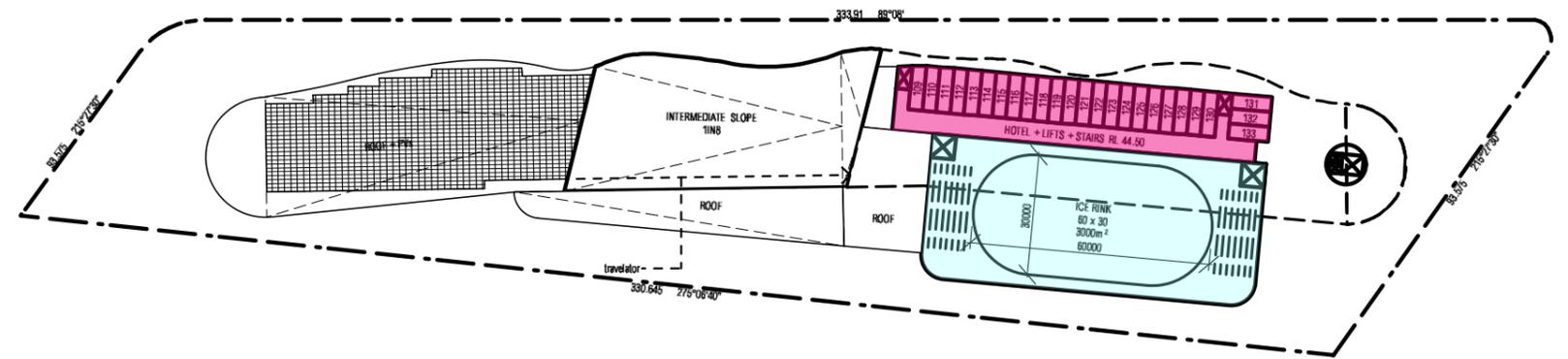
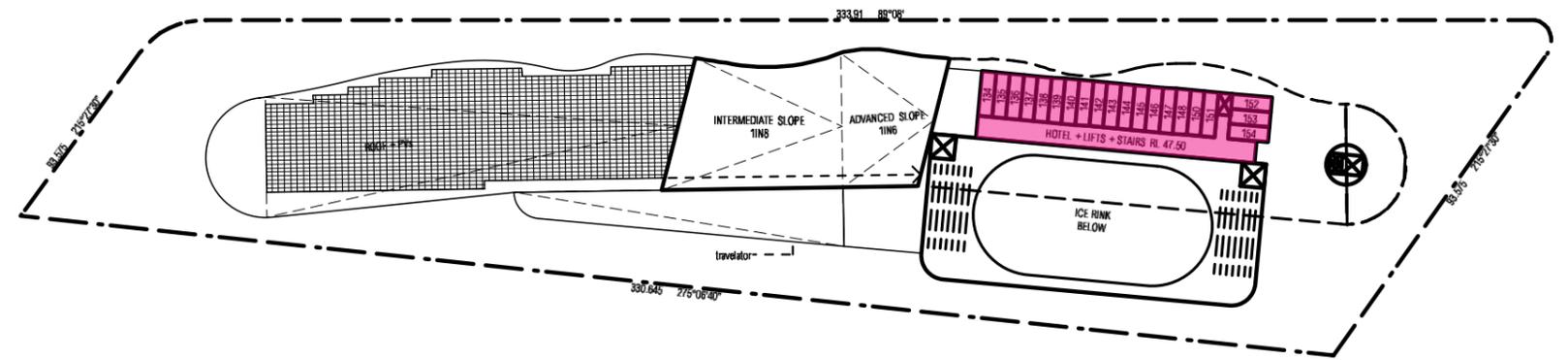


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### 4.13 internal uses + amenity related to urban design

#### Hotel / Conference / Food + Beverage

The hotel and associated conference/food and beverage activities, are located within a triangular shaped space facing north. This gives prime opportunity for natural passive solar gain to the rooms of the hotel, which is controlled through a series of shading devices and balconies in order to limit the amount of summer sun entering the rooms. The north-facing façade has a series of vertical plantings between rooms that are arranged on a steel trellis that provides an overall green finish. Combined with the dark green paint finish to the paneling behind, this disguises and camouflages the eight to ten storeys of the hotel viewed through the tree-lined avenue from any area to the north.

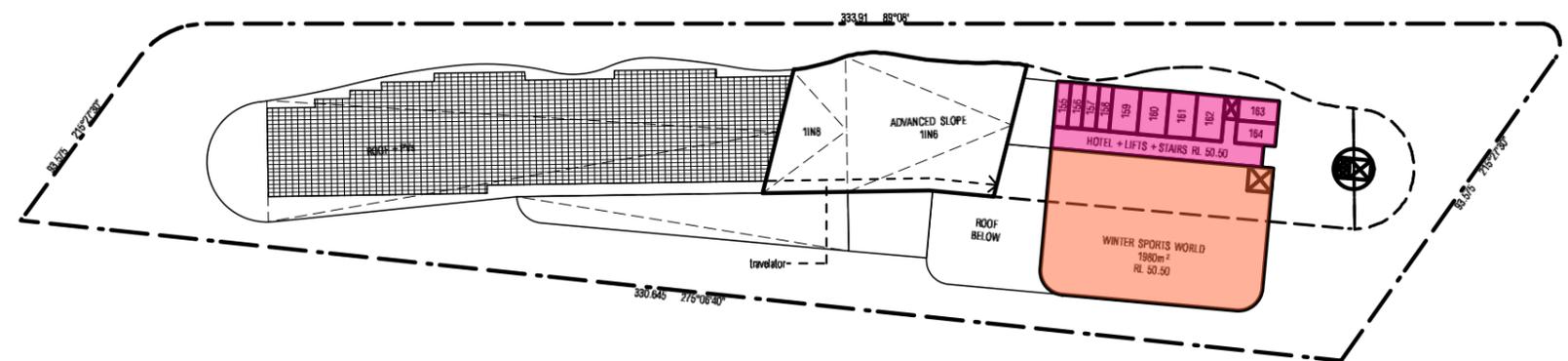
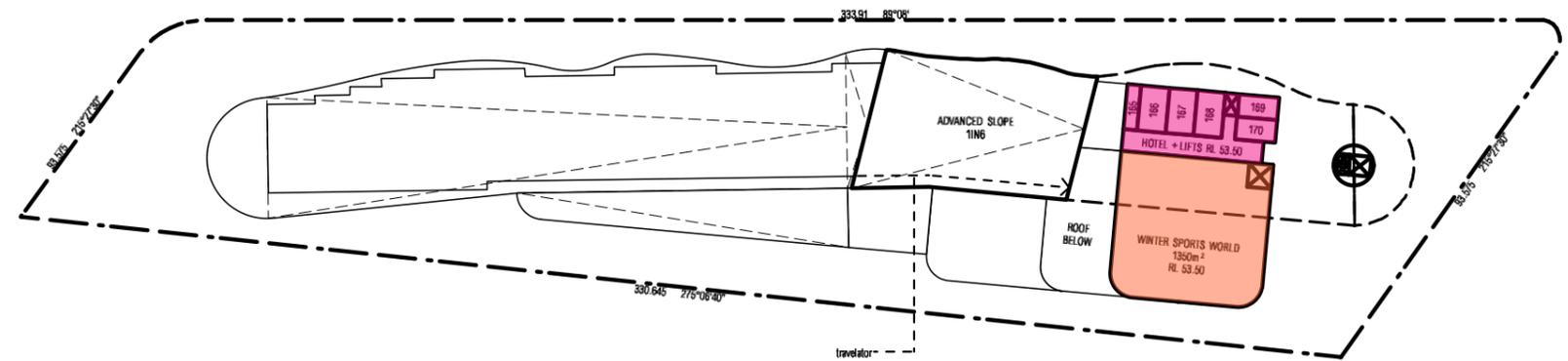
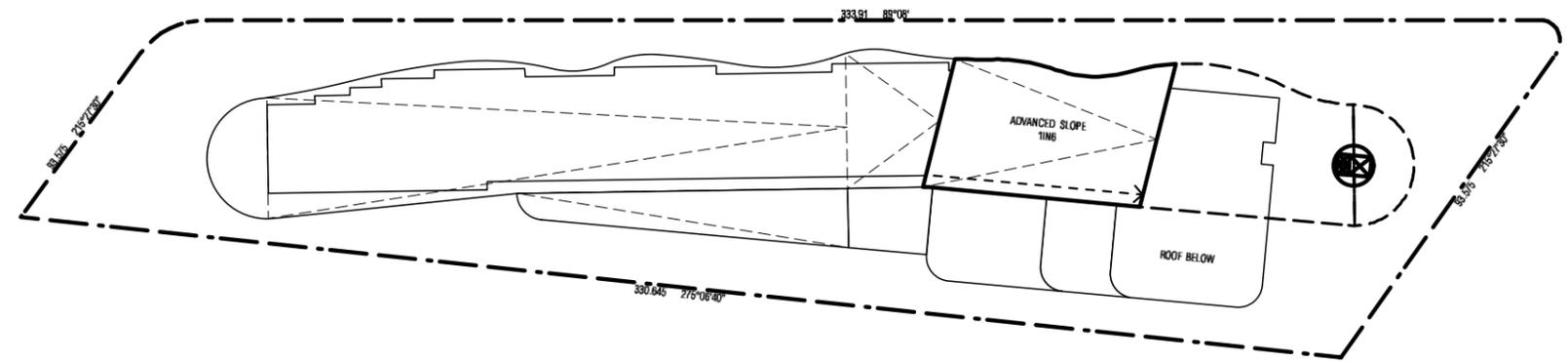


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### 4.13 internal uses + amenity related to urban design

#### Winter Sports World

The third part of the building is a car park which is entered from behind the foyer space and rises through four storeys of car parking on a series of sloped floors. Above this is the Olympic-sized hockey rink (for uses figure skating and ice hockey) and associated facilities for the Winter Sports World, including an ice-climbing wall, a gymnasium, an altitude training area and the changerooms, toilets facilities.



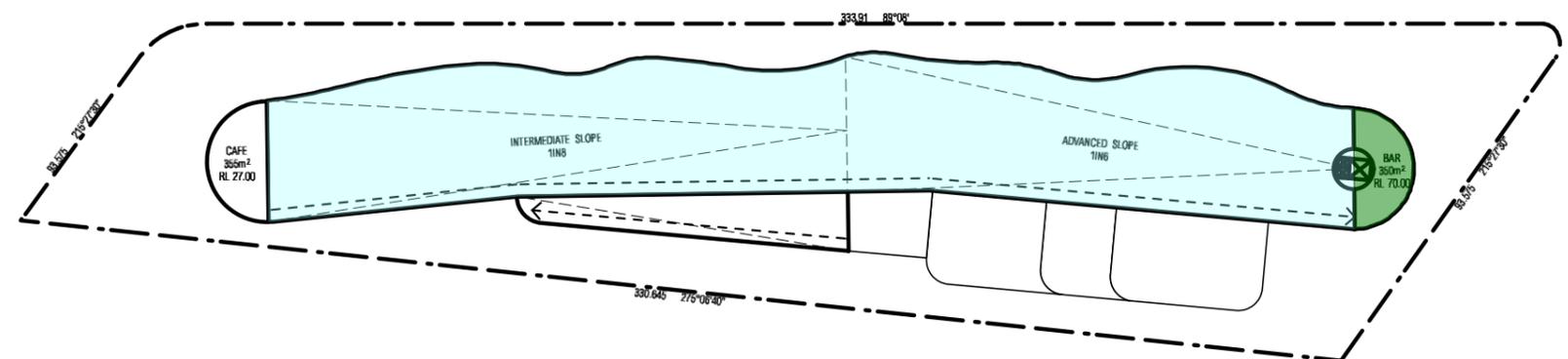
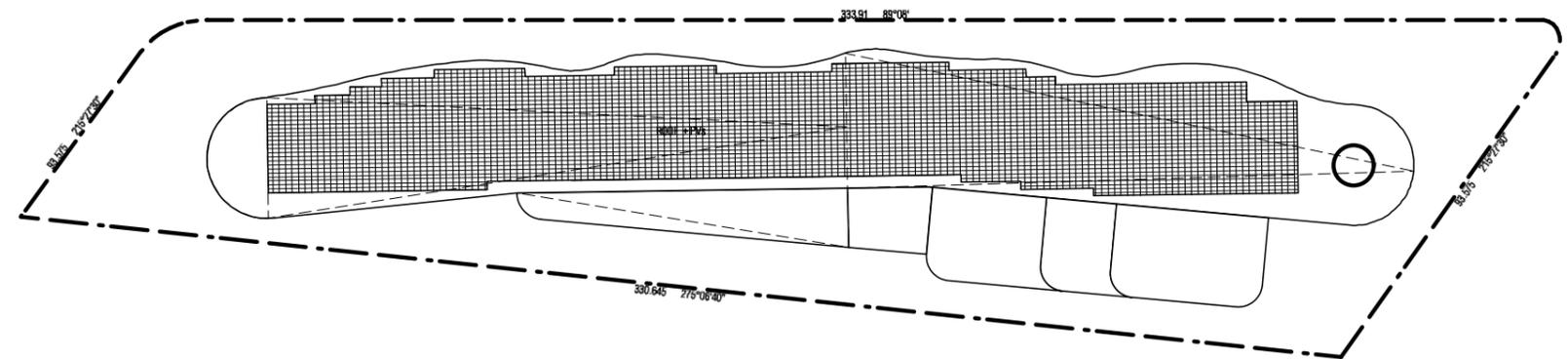
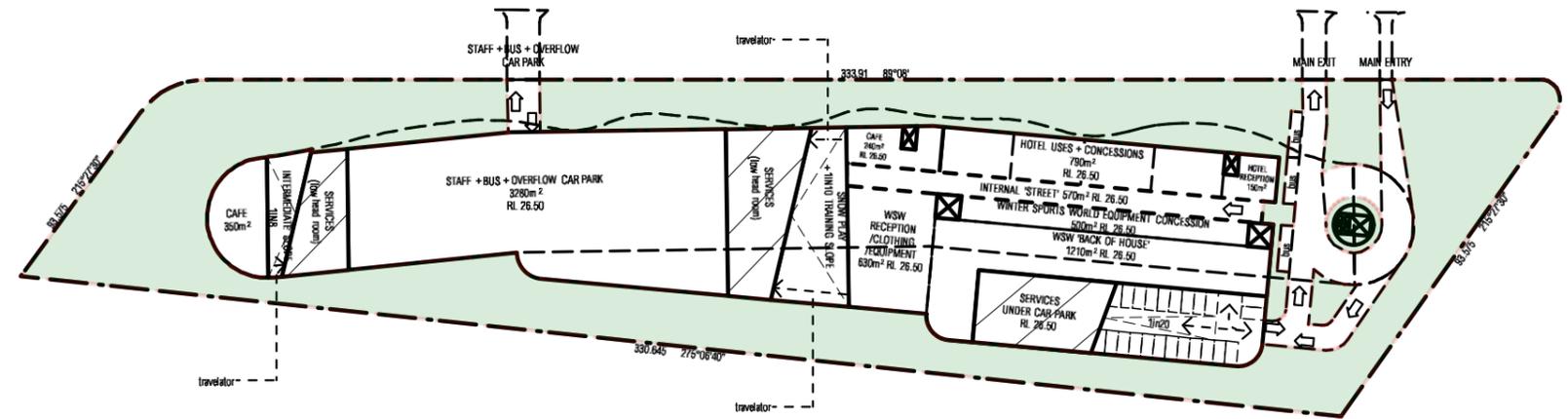
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### 4.13 internal uses + amenity related to urban design

#### The Ski Slopes

The ski slope is 300 metres long and is 7.5 m tall internally and 10 m externally. It is treated on the outside with a light blue glazed panel behind which are photovoltaic cells which contribute to the carbon neutral status of the building. These panels are lightly reflective, creating an illusion of a continuity with the sky and providing a continuous seamless surface across the face of the building. The face towards Jamison Road is lightly curved, giving it a changing reflectivity and reflecting the shape of the skiing, the curve of skiers as they move down the slope. The entire area of the ski slope is highly insulated in order to maintain the coolth of the interior. Hence the solidly walls are solid and without any windows, which also prevents overlooking any loss of privacy, particularly to the south.

The western end of the ski slope, which reaches down to ground level, features a food and beverage outlet, principally a café, which would be open to the west to the end and providing a source of both indoor and outdoor activity at the key gateway end of the building.



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## 4.13 internal uses + amenity related to urban design

### Internal Street

An 'internal street' leads from the foyer / drop off point (and the access from the carpark) to a large viewing window onto the beginners' slope / snow play area. The 'street' has the hotel reception and ancillary concessions (such as souvenirs and hotel needs) on the right, and the reception and ticket sales for the WSW, together with clothing, gear and equipment rental and sales. There is no independent retail area or shops, as all outlets are related as ancillary activities to the hotel or WSW. The street ends with a café on the right and a training / viewing room for the WSW on the left, both of which face on to the ski slopes.





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