PROPOSED SPECTATOR EVENTS AND EDUCATION ZONE

Architect's Design Statement to accompany Plan Change

Final Report - 7th December 2007

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1.0 INTRODUCTION

Since August 2006 the Carisbrook Stadium Trust (CST) has investigated a number of options for either a new spectator events facility or an upgraded / re-developed Carisbrook.

The preferred path is to develop a new spectator events facility that is not just used for rugby, nor just for sport. It is to have a much wider use which will embrace cultural, educational, entertainment and recreational events. This has the potential to benefit the community, both socially and economically. Of particular importance is the linking of this development with the University of Otago which provides an opportunity to enhance the role of the University within the community.

The Awatea Street site has been selected as the preferred site due to the opportunity to link the development with the University of Otago's requirement for additional space. The development of a new facility at Awatea Street embraces a mixture of permanent and temporary seating solutions and looks to capture the essence of the existing Carisbrook Stadium and its colloquial name and reference as the 'House of Pain'.

This report has been prepared as part of the documentation to accompany the request for a change to the Dunedin City District Plan. It sets out the environmental context of the proposed centre from an architectural perspective and then describes the type of built form that might eventuate from the implementation of the proposed Spectator Events and Education Zone provisions.

Figure 1.A

2.0 SITE LOCATION AND CONTEXT WITHIN THE CITY

2.1 Location

The proposed zone is located north of the centre of Dunedin, 1.5 km to the north east of the Octagon (Refer to figure 2.A). In addition to being within close proximity to the city centre, the site is located immediately east of the University of Otago campus. The Dunedin College of Education and the Otago Polytechnic School of Art is adjacent, to the northwest and south west edges of the site, beside Anzac Avenue. Logan Park is on the north side of the site beside Ravensbourne Road and Union Street East. The Otago Harbour is close by on the eastern side of the zone.

Figure 2.A

The site is bounded by Anzac Avenue to the northwest and Ravensbourne Road to the north. These roads form the western part of SH 88 from Dunedin to Port Chalmers. Proposals are currently underway to relocate SH 88 to the south east adjacent to the existing rail corridor. The proposed relocation of this major road forms the south east boundary of the proposed site. The southern boundary of the site is defined by the Water of Leith. A marina development across the rail corridor and road reserve is located to the east of the site. The central University of Otago precinct is located within an 8 to 10 minute walk to the northwest of the site along Union Street East.

2.2 Land Formation and Use

The land was created in the 19th century through the process of land reclamation that generated the port, Logan Park and the waterfront that we see in Dunedin today. Prior to reclamation the area was low laying tidal marshes along the mouth of the Water of Leith as it discharges into the Otago Harbour.

Since reclamation, the land has been developed and used for light/medium industrial activities with a variety of uses occurring in various facilities throughout the 20th century. The land currently accommodates commercial and industrial businesses.

2.3 Surrounding Topography

The topography of Dunedin is characterized by hills that contain the inner city along its western and northern flanks and include the hills east of the City across Otago Harbour. To the west the hills rise up gradually from the flat lands beside the harbour and then more steeply to the elevated residential areas of Mornington, Roslyn and Maori Hill. Beyond these residential areas the topography continues to slope up to the ridge line running through Kaikorai Hill and Mount Cargill further north. The topography within the immediate vicinity of the proposed centre is essentially flat with the exception of Logan Point to the north which contains a quarry. Here the hill formation which originally defined the harbour edge overshadows the site and rises up to the north towards Signal Hill. Beyond this point the flat land extends out towards the harbour edge and west towards George Street where the transition occurs between the flat land and City Rise.

The Awatea Street locality is prominent within the context of Dunedin and due to its topography is visible from many vantage points around the City. In particular any development within this zone will be overlooked by the elevated residential areas to the west (Refer to figure 2.B) and from Waverly on the eastern side of the harbour. In addition to being prominent from an elevated perspective, any buildings have the potential to be a landmark when viewed from the foreshore along the eastern side of the harbour.

Figure 2.B

3.0 MASTER PLAN DESIGN

3.1 Objectives

Master planning of the land within the proposed zone has five principal objectives:

- Connection with the immediate natural context - Logan Park, Water of Leith and the Otago Harbour
- Reinforcing connections with the University Campus
- Integration of the likely spectator events and education facilities
- Establishment of clear linkages for all transport modes to the site and facilities
- Overseeing the physical regeneration of the site

3.2 Land Use Strategy

The fundamental layout of the built elements provided for by the Zone and its urban design has been configured around two main public spaces – an inward focused Stadium Quadrangle contained on all sides and an outward opening University Quadrangle (Refer Figure 3.A). This parti continues the theme developed within the University of Otago campus, of organizing built form around an inter-connected sequence of landscaped quadrangles; also a common feature of many other famous universities. On the one hand a sense of openness and permeability will encourage community interaction and accessibility, while on the other, a sense of containment will add to the drama and intensity of staged events.

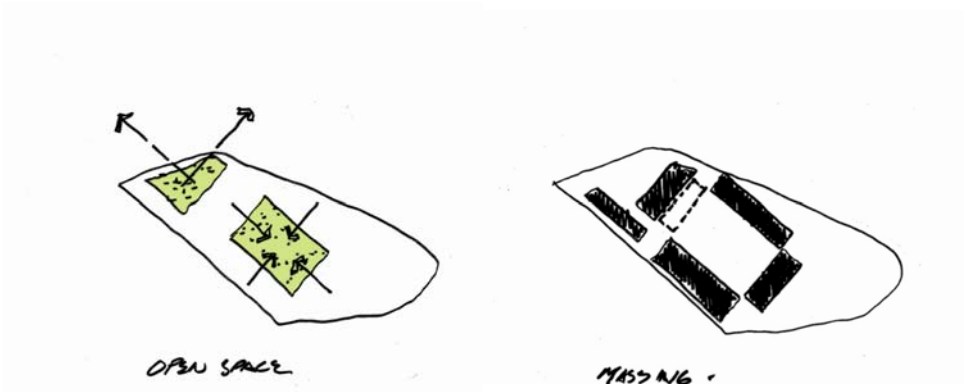


Figure 3.A

The overall form of development provided for by the Zone has been organized into three principal areas (Refer Figure 3.B):

- University Area
- Stadium Area
- Car parking and Vehicle Area

The university facilities define the head of the precinct and occupy the western end continuing the University Campus across Anzac Avenue. These facilities generate student activity through out the week and provide definition and a gateway to the eastern end of the University of Otago Campus. The stadium occupies the main body of the precinct. The size and scale of the structure and its enclosing roof re-defines the north western corner of Dunedin City, becoming a gateway as one approaches from the north east either by land or sea. A landscaped vehicle and car parking area accessed from Ravensbourne Rd occupies the eastern end of the site and creates part of the buffer between the stadium, the re-aligned SH 88 and the harbour edge.

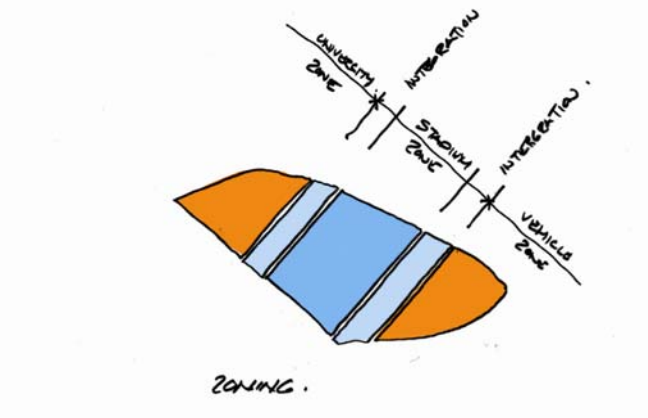


Figure 3.B

3.3 Public Open Spaces

A key strategy to encourage public accessibility has been to avoid perimeter fencing on the street boundary. This creates opportunities for external open spaces that are accessed by the public outside of event time.

On the western side of the site a major urban plaza is proposed. This space will function as the major pedestrian connection and arrival gateway to the Precinct from the centre of Dunedin. Main access to the buildings are located off this plaza. The plaza provides a major community and university asset at all times as an urban landscaped space becoming a focal and gathering point for the north eastern sector of Central Dunedin.

3.4 Transport Infrastructure

Movement patterns are critical to the design of the type of facility that will be enabled by this Zone. The zone provisions encourage good access and circulation.

A key strategy is to allow people choice and encourage sustainable modes of movement. The transport strategy considers the movement of all modes – cars, taxis, service vehicles, trains, buses, shuttle buses, coaches, cycles and pedestrians (including those with disabilities). Public transport efficiencies and options will encourage people away from private car use. (Refer Figure 3.C)

The proposed Zone will enable activities that could be significant generators of activity and people movement. On event days there will be large numbers of people moving to and from the city and the region: during non event times there will be significant traffic and activity generated by the integrated facilities.

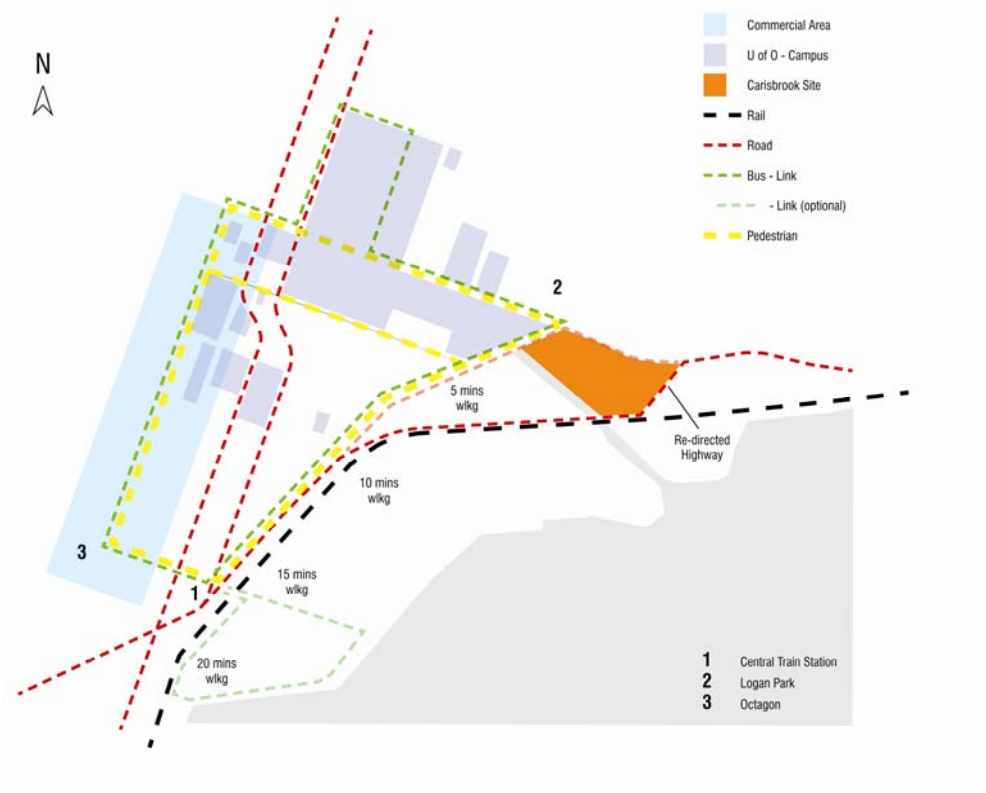


Figure 3.C

3.5 Pedestrian Facilities

The Zone provisions require the establishment of a major public plaza space adjacent to Anzac Avenue. This notion of a front door links the built development within the Zone. This frontage forms the primary event and non- event day pedestrian entry to the complex. During events it will be a meeting place both before and after events as well as a crowd gathering space in the case of an emergency evacuation of the stadium. During the University week it is envisaged as an outdoor amenity space for both the public and students encouraging social interaction.

4.0 LANDSCAPE DESIGN

4.1 Landscape Design Objectives

Should the Spectator Events and Education Zone be implemented, then the current thinking is that significant landscaping will be included as an integral part of the development, enhancing the precinct and improving the amenity for Dunedin City and the University of Otago. It is proposed that the landscaping address connections beyond the limitations of the site boundary with the University and Stadium acting as a promoter for intensification and redevelopment of the north eastern part of Dunedin City.

Key objectives of the landscape design include the following:

- Provide a link between the City, Logan Park and the New Stadium Complex
- Identify and enhance the relationship between the University and the New Stadium
- Provide a human scale to the stadium precinct
- Define the external spaces around the stadium and university and guide its users
- Creatively interpret the quite different external spatial requirements of the stadium and the university into a single design.

4.2 Design Approach

Connection with the city is reinforced by structured street tree planting continuing around the perimeter of the precinct. This will reinforce the existing streetscape patterns along Anzac Avenue, Union Street East and the beginning of Ravensborne Road along its northern side.

The mixture of University and Stadium activities creates the need for a plaza in front of the main buildings that can accommodate the different needs of both user groups. The plaza needs to be large enough to accommodate large crowds but it also needs to work at a smaller scale to be used as an amenity space by the University. Connection to the University Campus could be enhanced by paving Anzac Avenue between the Water of Leith and Ravensbourne Road.

It is anticipated that this plaza area will orientate towards the northwest establishing a physical connection with Logan Park. This space can provide relaxation spaces with outlook to Logan Park as well as back towards the rest of the University and City. As part of the landscaping strategy it is envisaged that local artists could be included in the design of artworks for the plaza and any art works to be placed in it.

The landscape will be designed in such a way that it breaks the large scale of the buildings and becomes user friendly for pedestrians. Objects, such as street furniture help articulate exterior places and create an opportunity for people to engage and react with these spaces. The use of street and feature lighting is envisaged to ensure safety of users, as means of orientation, and to assist in the creation of a civic space.

The predominance of the motor car is significantly reduced by the re-alignment of SH 88 and by the placement of the main car park away from the Plaza. Trees are used to lessen the impact of a large facility with its surrounding environment and tie the site wide landscaping into the existing street network.

5.0 STADIUM DESIGN

5.1 Building Design Objectives

As with the landscaping of the precinct considerable thought has gone into the arrangement of built forms within the zone. The following describes the key elements and explains the form of the stadium development that the zone will enable.

The development of the proposed spectator events and education zone has been organised to provide an all weather facility with a maximum capacity for 35,000 people. This is distinct from the seating bowl, which is noted in the design brief to provide for a capacity of 30,000 people.

The development has sought to provide a multi-purpose public assembly facility configured around a rectangular playing field and capable of hosting a range of events such as rugby union, rugby league, soccer, American Rules Football (Grid Iron), horse trials, Highland games, music concerts and other mass assembly events as deemed appropriate.

The development has sought to address allegorical and physical issues on the insertion of a large new highly visible building into the context of Dunedin City and its relationship to the landscape and the predominantly industrial neighbourhood. The aim is to create a modern, contemporary stadium appropriate for hosting major events and representing Dunedin and Otago as a whole to the national and international community.

5.2 Composition

The stadium massing is defined by the site constraints, the seating bowl requirements and minimum clearances above the playing field (refer figure 5.A). The seating bowl is organised into four stands: the north, south and east stands having a permanent capacity for 25,000 people; and the west stand having temporary capacity for 5,000 people. This configuration will be finalised through the design stages. The playing field is orientated on a southeast – northwest axis in keeping with other New Zealand grounds (Eden Park and Carisbrook). Unlike any other stadium in New Zealand a transparent roof over the entire playing field is proposed. Stadium facilities such as changing rooms, corporate facilities, lounges and the like are contained within the larger south stand structure.

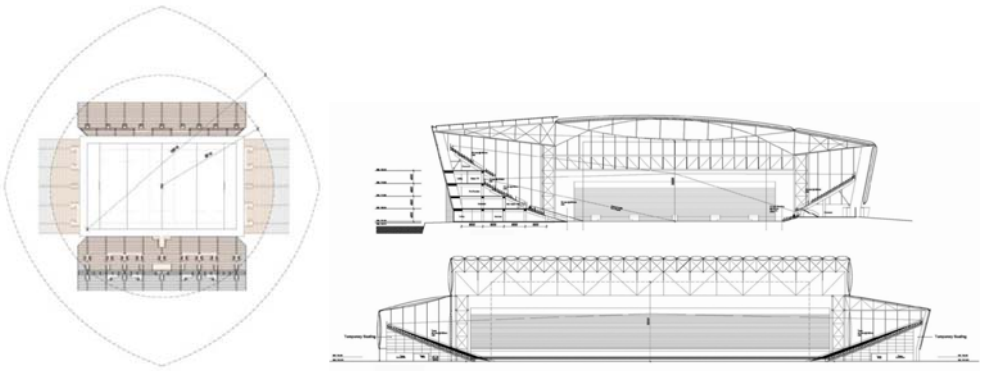


Figure 5.A

The north and south stands and the playing field are all enclosed within a single architectural form that sits against the harbour, the park and the quarry. This mass is broken down by the transparent ETFE pillow veil that forms a ‘wrap’ enveloping the various functional requirements of the stadium, blurring the boundaries between solid building and the environment from the north, east and western sides (Refer to figure 5.B). The use of the transparent pillows reduces the apparent size and bulk of the building mass in relation to the surrounding residential / light industrial neighbourhoods.

Figure 5.B

The dominant southern stand rises up beside the Water of Leith with an inclined overhanging façade that faces the City centre and provides a termination of the eastern view corridor from the city towards the quarry. The north stand also incorporates an overhanging façade, rising up at an inclined plane towards Logan Park. This façade, however, is transparent and provides a veil for the stadium when viewed from the sensitive setting of Logan Park. The structure will only be visible behind the ETFE envelope line on the north elevation and hidden entirely by the strategically punctuated profiled metal cladding on the southern elevation (Refer to figure 5.C). The cladding on all elevations of the stadium follows the structural lines beneath and accentuates the honest structural language.

Figure 5.C

The massing of the south stand from an internal pitch side point of view is defined by the strong stepped form of the two seating tiers enclosing the field in a classic amphitheatre format along the south side with further enhancement by the lowering of the north stand. The East and West stands flank both ends to complete the stadium enclosure on all sides of the pitch. The roof, which sweeps down from the high point of the south stand to the low point of the north stand, intensifies the view from the south stand on the field of play as all the structural and architectural elements fall towards the north side. The east and west stands have presented to them the game and atmosphere as though through a proscenium arch.

5.4 Architectural Character

The architectural character of the proposed multi-purpose stadium is inspired by both the local culture and its physical context, referencing the industrial and nautical heritage of the City. Set against the harbour and the surrounding hills the large angled roof form is the defining moment of the architecture. Exterior materials are in harmony with the surrounding landscape: they generally are naturally finished. With the exception of the ETFE, materials will generally be sourced locally and relate to local building traditions. The highlight however, is the dramatic semi-transparent ETFE roof and cladding that encloses a significant part of the main stadium.

Figure 5.C

The façade and roof float over the stadium and are designed to diffuse scale by being a lightweight counterpoint to the mass of the stands. The façade is designed to be translucent / transparent which will mitigate the scale of the stands along the northern side and create the impression from a distance of the façade merging with the sky. The veil allows the building to take on a chameleon character with the skin responding to the changing moods of the day and night. During the day the translucent façade will shimmer in the changing environment from dawn to dusk with the sky contrast subtly altering the appearance of the façade. The daytime view would allow glimpses of the activity within yet provide a veil to the mass and bulk of the building.

The adoption of the transparent veil surrounding three sides of the stadium and the roof has been developed to soften the building mass and provide a screening device to the facility that can provide security yet allow natural daylight to penetrate the majority of the pitch. The hovering ETFE pillows create an ethereal quality counterpointing the metal shroud which envelopes the south stand.

Along the outside elevation of the south and east stand the envelope is proposed to be a sleek profiled metal cladding sliced and perforated. In the case of the south stand this allows for views and ventilation in and out from the functional areas within. Vertical cores containing stairs and service areas contrast with the open lounges behind the punctuated metal cladding, creating subtle changes in the apparent massing and articulation of the building.

5.5 Planning

The seating bowl is organised into four separate stands – a North, East, West and South stand. It is intended that all four stands be fully enclosed with temporary flexibility within either the East stand or the West stand. This flexibility will allow for temporary seating to be installed providing maximum seating capacity for large events or re-used as either an extension of the University facilities as gymnasium space or for other event related activities.

The North, East and West stands will accommodate a single level only. This Level 1 accommodation forms the concourse and provides access to the seating tiers. Also accommodated at Level 1 are the permanent toilets and areas for the temporary food and beverage concessions, merchandising outlets and satellite first aid stations.

The South stand will be a fully serviced stand with accommodation distributed over five levels:

Level 1 accommodates access stairs and lifts to all the levels in the South stand, the corporate, media and team entrance, security staff, catering staff and venue management. Also accommodated at Level 1 in the South stand is the main production kitchen, team changing areas, a player's lounge, media facilities, groundsman's offices, workshops and stores and plant areas. An internal route is provided at Level 1 with secure access at each end of the South stand. This is provided for ambulance access, VIP secure drop off and pick up and also the transportation of goods and authorised people.

Level 2 accommodation provides direct access to the lower tier of seating and forms the enclosed concourse for patrons on this level. The Level 2 concourse provides access to food and beverage concessions, merchandise stalls and toilets.

Level 3 accommodates two large dining lounges and associated finishing kitchens and toilet facilities. These lounges have direct access to a dedicated seating area within the upper section of the lower tier of the South stand seating bowl.

Level 4 accommodates the corporate suites, the media, coaches' facilities and the security command post. This level is served by two pantry kitchens and toilets.

Level 5 accommodation provides direct access to the upper tier of seating and forms the enclosed concourse for patrons on this level. The level 5 concourse provides access to food and beverage concessions, merchandise stalls and toilets.

5.6 Access and Circulation

The main entries into the stadium are located in the northwest, north east, south east and south west corners. The design allows views of the field to be gained through these areas to create a sense of arrival when entering the stadium and to provide a visual connection between the external entry plazas and the pitch. Corporate patrons and Stadium members enter the South stand via a lobby. Stadium Staff and service entry is located at the south east corner with access from Ravensborne Road via the car park and service road.

The public circulation within the stadium is designed to allow patrons to move freely between stands while remaining within the secure zone of the stadium precinct.

5.7 Sports and Architectural Lighting

The design of the new stands incorporates all sports lighting for the stadium underneath the roof plane on the north and south side of the pitch. Locating the lights within the enclosure reduces the potential for light spill resulting from the use of lighting towers.

The development of the profiled façade pillow veil and the profiled metal cladding allows event based architectural lighting and projection to be used on the façade on event days. This lighting would create event based experiences for the building utilising sequenced neon lighting, wash lighting to the walls behind the veil and projection onto the façade to create an artistic graphic on the façade. It should be noted that this system is designed only to operate on event days and as such would only occur at times when the sports lighting is used.

5.8 Acoustics

An assessment of the environmental noise effects and recommendations are included in a separate report entitled ‘Dunedin Multipurpose Stadium: Assessment of Environmental Noise Effects’ .

5.9 Reflectivity

Glare nuisance can arise when direct sunlight is reflected off a surface rather than transmitted through or absorbed by that surface.

The roof is designed with a shallow pitch that angles away from the City to the south and west and towards Logan Park and the quarry to the north and as such is unlikely to present a significant glare issue for the surrounding elevated neighbourhoods overlooking the stadium.

The façade around the perimeter of the stadium is generally set at an inclined angle. Direct sunlight incident on these surfaces will be reflected down towards the ground avoiding the potential for significant glare issues.

Where the façade runs vertically it is anticipated that light incident on the convex shaped ETFE pillows will be dispersed thus avoiding a concentration of reflected sunlight.

6.0 UNIVERSITY DESIGN

6.1 Objectives

If implemented, the proposed zone will also enable the establishment of new university facilities. While design detail is not developed as for the stadium, the following explains the current thinking on design matters.

Three key objectives have been identified for the University Area:

- Creation of a focal node at the eastern end of the campus to complement the centre of the Campus towards the West.
- A design that has a scale and character that is recognisable as a university building and distinct from the stadium
- Provision for approximately 13,400m² of usable university space that could be made up of general academic space, university student support activity spaces and recreational space for Unipol Services. (Unipol Services provides recreational opportunities to Otago University Students Association and Otago Polytechnic Students Association members.)

6.2 Composition

There is a clear preference by the University of Otago to locate all the university facilities at the western end of the Zone. The current thinking is to provide for these facilities within a building form that becomes a gateway landmark for the University of Otago at the east end of its campus. In providing a major node in this location, the development will have the tendency to reinforce the sense of inclusion within the campus of the smaller buildings along Union Street East and the Water of Leith. The height and scale of the building forms containing the university are designed to relate to the existing built fabric as it exists along Anzac Avenue. They also act as mediating masses reducing the perceived scale of the much larger stadium mass as approached from Anzac Avenue and Union Street East. (Refer Figure 6.A)

It is proposed that Unipol Services be located beside the Western Stand Flexi-Space. This creates an opportunity to integrate with the stadium, locating some of the required gym facilities within this flexi-space. Alternatively Unipol could be self contained, leaving the flexi-space free for other sporting events, exhibitions, and the like. In addition to Unipol Services there is a clearly identified need by the University of Otago to provide approximately 7,000m² of usable space for academic and student support activities.

Figure 6.A

The plaza is an important outdoor space for the University. It is intended that this space be a ‘hub of activity’ during the university week (Refer Figure 6.B). Entry to the University will be directly off the Plaza and be available 24/7 year round. The university facilities will overlook the Plaza reinforcing the principles of crime prevention through environmental design (CPTED). Ground level spaces being considered could include a café, sporting equipment retail shop, fitness clinic and entry foyers and could integrate with and positively activate the Plaza edge. This edge could be further enlivened by visual connections to gym space, dance space and the like established through a transparent facade along part of the western face.

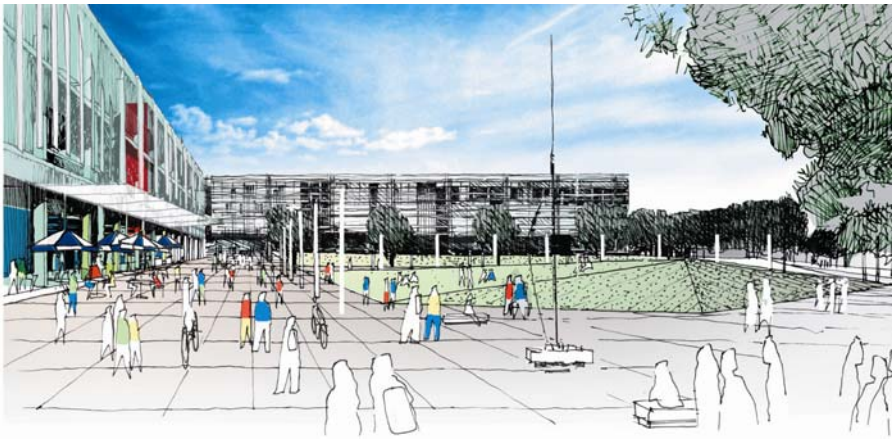


Figure 6.B

7.0 CONCLUSION

The development provided for by this plan change provides a unique opportunity for Dunedin to expand upon a vision for the future growth of the city. Developments such as major stadia located on redundant or under utilized sites that are no longer an integrated part of the city have been great catalysts for the regeneration of surrounding city areas. A prime example of the potential for urban regeneration around the development of a major stadium is Denver's Coors Field. Coors Field, opened in 1995 as home of the Colarado Rockies baseball team, catalyzed and accelerated the growth of Denver's languishing 26 square block lower downtown area known as LoDo. What might have taken 10-12 years to redevelop, LoDo experienced in 18 months.

In a similar manner this vision for a new spectator events and education zone ties in with Dunedin City's present vision to encourage revitalisation of the harbourside area and its reconnection to the central city.

The proposed zone provides a number of benefits for how central Dunedin works as a city:

- It provides a strong built civic identity for the revitalisation of the north eastern City quarter. Within walking distance from the City centre, permitted activities will act as a catalyst for regeneration of the city precinct between the Octagon, the proposed Harbourside Redevelopment and the new proposed Zone (Refer to figure 8.A)

Figure 8.A

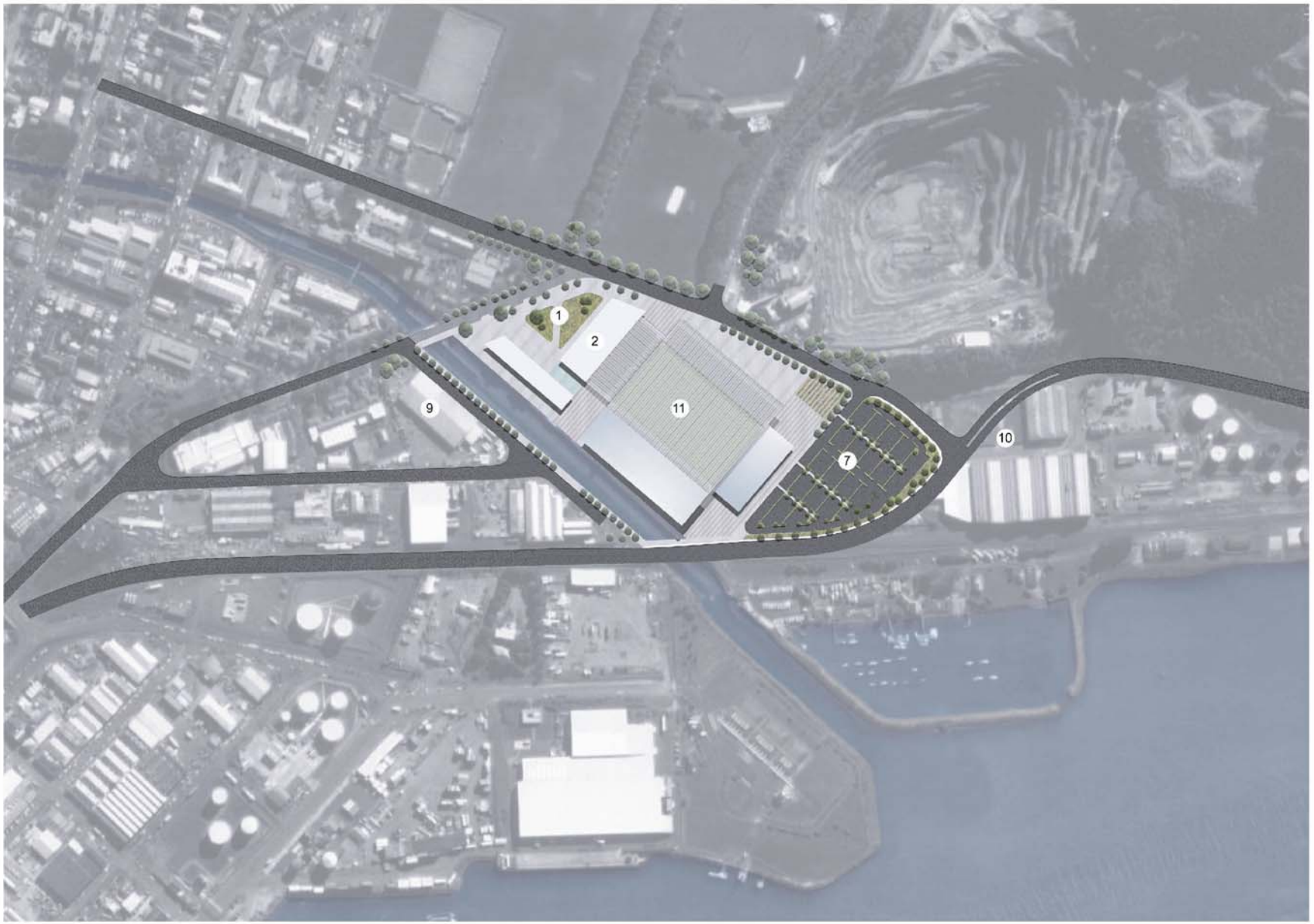
- It extends and provides an end or ‘culmination’ point for the University of Otago campus. A major University Gateway at this location will encourage an intensification of use by the University along the Union Street East axis and Water of Leith. (Refer to figure 8.B)

Figure 8.B

- It provides a catalyst for the re–establishment of a City connection to the waters edge. The proposed zone and the development it will facilitate, combined with the current proposed Harbourside Development and future University of Otago development along the Water of Leith will provide the City of Dunedin with a much improved connection to the waters edge.
- It provides for integration of the sporting and cultural identity of Dunedin within the built fabric.

Appendices

Appendix 1	City Context - Master Plan
Appendix 2	Site Context - Master Plan



City Context - Master plan

1. Plaza
2. University Building
3. East Stand (option)
4. West Stand (option)
5. South Stand
6. North Stand
7. Carpark
8. Entry Points
9. Event Public Transport Node
10. Re-aligned SH88
11. Pitch

Site Context - Master plan

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