Urban Design

Context

Assessment of Urban Design Effects of proposal for proposed Spectator Events and Education Zone: Dunedin City District Plan

Prepared for Carisbrook Stadium Trust

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1. Introduction

1.1. This urban design assessment is one of a number of technical reports prepared to inform the preparation of a proposed Plan Change to the Dunedin City District Plan. The Plan Change will introduce a new zone to enable the establishment of educational facilities, a plaza, a multi-purpose stadium and car parking on a site to the south east of Anzac Avenue and north east of the Water of Leith. The site to be encompassed by the new zone is currently zoned Industrial 1.

1.2 This report firstly considers the site and its environmental context, then assesses the potential impact of the proposal on that environment. The report assesses the effect of the most likely scenario based on the current proposal as well as the worst case scenario, should the project not proceed as anticipated.

1.3 Dunedin City Council became signatories to the New Zealand Urban Design Protocol[1] prior to its launch in March 2005. In endorsing the protocol the Council has agreed to support and demonstrate the principles of quality urban design. The protocol identifies seven essential design qualities that create quality urban design. The proposal been assessed against these qualities in section 13 below.

1.4 Appendix 1, Part 1, contains photographs of the site and its surrounds. Appendix 1, Part 2, contains photographs of the site taken from vantage points around the city on which an image of the possible built form of the stadium has been superimposed.

2. Site description

2.1 The site is flat, approximately 6.9 hectares in extent. It is bounded to the south west by the Water of Leith, to the north west by Anzac Avenue and to the north east by Union Street East and Ravensbourne Road. The south eastern boundary runs between the main south railway line and Ravensbourne Road and will follow the boundary of a realigned State Highway (SH) 88. The site is made up of a number of land holdings in Awatea, Leander, Parry and Magnet Streets and the adjacent road space.

2.2. Within the site boundaries are expanses of vacant land and a number of large concrete industrial buildings, some of which are used for storage and others are disused. These extensive sites and buildings are interspersed with smaller premises and yards. The roads are used for daytime parking.

3. Site context

3.1. The site lies to the north of Dunedin City Centre, 1.5km to the north east of The Octagon. It is situated at the northern edge of the flat terrain that runs in a band around the edge of the Otago Harbour. To the north east is a quarry from which a concrete batching plant operates. The plant includes a cylindrical silo on the corner of Butts Road and Ravensbourne Road,

[1] Ministry for the Environment. New Zealand Urban Design Protocol, March 2005

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approximately 30m in height. Logan Park, a large area of open playing fields, is immediately to the north across Union Street East. The University of Otago campus is situated to the west, with the Dunedin College of Education and the Otago Polytechnic School of Art adjacent to the north west and south west edges of the site, alongside Anzac Avenue. Beyond the park and the university buildings is an older residential area which rises up to the west.

3.2. South of the Water of Leith is an area occupied by educational buildings, including the Hocken Library, and industrial warehouses and yards. Beyond the railway line is the Port of Dunedin, where a transfer station, cold storage and port operational buildings are located. To the east of the site, between Ravensbourne Road and Parry Street, are a large vacant area of hardstanding and a warehouse building to the east. The majority of the block from Parry Street to the main south railway line is occupied by one extensive storage building. Alongside the southern side of the railway line is a reserve and this is adjacent to a boat harbour.

3.3. Signal Hill rises up steeply to the north east of the area. Apart from the quarry located on the lower edge of the hill, most of the hillside is tree clad.

4. Other proposals and visions for the area

4.1 State Highway 88 is proposed to be realigned to run alongside the railway line and will form the southern boundary of the proposed zone. A new shared pedestrian and cyclist path is proposed as part of the Dunedin City Council Harbourside Cycling Vision. This is proposed to run close to or alongside the waterfront. Redevelopment of the Harbourside at the southern end of the port is proposed. A Plan Change to facilitate this[2] is shortly to be publicly notified. A Logan Park Development Plan is in the course of preparation. The plan is designed to protect the character of Logan Park whilst accommodating increasing demand.

5. Dunedin City District Plan objectives and policies

The Dunedin City District Plan includes the following objectives relevant to this assessment.

Objective 4.2.1.
Enhance the amenity values of Dunedin

Objective 13.2.6.
Ensure that development (including alterations and additions to buildings) does not adversely affect the character and amenity of the central city precincts.

Objective 13.2.7.
Create and promote a safe environment

[2] Dunedin City Council, Proposed District Plan Change 7: Dunedin Harbourside

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Objective 19.2.1.
Avoid, remedy or mitigate the adverse effects of signs on amenity values

In addition the Campus zone includes a policy as follows:

Policy 12.3.9.
Facilitate the visual integration of the campus within the broader city townscape.

It is assumed that a similar policy will apply to the proposed zone.

6. The proposal[3]

6.1. The proposal comprises a multi-purpose stadium, teaching space for the University of Otago, a plaza, and car parking. The stadium, with the capacity to hold a maximum of 35,000 people, is to be situated in the centre of the site. The stadium will be aligned in a NW-SE orientation and comprise four spectator stands. The south stand is the main stand and will be approximately 55m high. The north, east and west stands are significantly shorter than the south stand. The roof will slope down from the higher south stand to the lower north stand. The footprint of the stadium building will be approximately 190m x 170m.

6.2. The building will be constructed of a steel framework. The southern elevation and southern end of the roof are intended to be clad in grey coloured steel. The remainder of the roof will be covered in a translucent Ethylene Tetrafluroethylene (ETFE) polymer. This material will also extend down the north, east and west elevations to first floor level (3m above ground level). There are two layers of the membrane with air in between. The roof could be described in layman's terms as a transparent quilt. It is intended that the stadium have its name signage on each elevation.

6.3. The teaching space for the University of Otago will be located on the western portion of the site and is intended to comprise up to 13,500m² of useable floor space. The remainder of the site will be occupied by a public plaza at the north western end, an outdoor space to the north east of the stadium and a car park on the eastern portion of the site, adjacent to the realigned SH88.

6.4. The proposal is being prepared in conjunction with the Plan Change and the details of the design are in the process of being refined.

[3] The proposed buildings and plaza are explained more fully in The Architect's Design Statement which accompanies the Plan Change. The car park is explained more fully in Beca Infrastructure Ltd. Proposed Spectator Events and Education Zone, Transport Impact Assessment, 2007.

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7. Urban Design Issues

7.1. Constructing a new stadium and university buildings in this location raises a number of urban design issues as follows:

7.2. The appearance of the development
What will it look like from close quarters, within the wider townscape and from across the harbour?

7.3. Linkages
How will the site be connected visually and physically with the central city, with the University, with the waterfront?

7.4. Interfaces
How will the development interface with its surroundings?

7.5. Safety and comfort
Will the users of the site feel safe and comfortable at all times?

7.6. Positive impact of the proposal
What will be the benefit of this proposal to the immediate environment and the wider townscape.

ASSESSMENT OF EFFECTS

8. The existing environment

8.1. The proposed site comprises wide streets, a hotchpotch of industrial buildings, including a number of large functional concrete storage buildings, storage yards, vacant sites and parked cars and trucks. Also notable is a lack of vegetation, All of these components combine to make the site an environment which is visually and physically unappealing.

8.2. The immediate edges of the site are of variable visual quality. The cement silo is a prominent industrial feature in the townscape which acts as a local landmark. The silo, the adjacent buildings connected with the quarry, the cement dust and manoeuvring cement mixers together form an unpleasant environment at close quarters along the Ravensbourne Road frontage of the site. Logan Park is an expansive attractive green space, with lines of mature trees along the road boundaries. To the west, in Union Street East, is the Dunedin College of Education, which comprises a substantial complex of educational buildings of varying height, up to five storeys. They are of consistent materials and colour (grey and cream walls, green roofs). The edges of the site have tree and shrub plantings. As a whole the College of Education forms a unified and pleasant complex. The adjacent Anzac Avenue, has a wide grass berm and mature street trees, which enhance the street scene along this stretch.

8.3. The Water of Leith runs in a large concrete drainage channel at this point. Between the Water of Leith and Minerva Street is a narrow greensward, which has young trees planted at intervals along its length. On the far side of Minerva Street is a two-storey industrial building, which houses the Otago

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Polytechnic School of Art and the Unipol sports centre. The building is dated and run down in appearance. Although the environment of the area to the south west of the site is somewhat degraded, it has the potential for enhancement through the beautification of the river channel and the redevelopment of the industrial buildings. The railway line has no visual merit and an existing pedestrian/cyclist underpass is uninviting. The boat harbour reserve is unkempt, but the greenery, adjacent boats, their masts and the water beyond all combine to provide a visual scene and ambience, which contrasts with the adjacent industrial area.

8.4. The proposed realignment of SH 88

The eastern edge of the proposed zone will be formed by the realigned SH 88. This road will be at grade over most of its length and relatively heavily trafficked. The intended roadside landscaping is not known, but it is assumed that the road will be utilitarian in appearance.

8.5 Summary of existing environment

The site and its environs are somewhat run down, but there is considerable potential for improvement. Logan Park, the most attractive existing feature, provides an extensive open green space, which can be capitalised on as a setting for a large scale building. The Water of Leith, the existing under utilised industrial areas and the Boat Harbour all provide scope for upgrading the visual and physical character of this section of the harbourside. The area has a large scale grain with wide streets, sizeable buildings and extensive outdoor spaces.

9. Visual impact assessment

Short range views

9.1. The site is clearly visible from Logan Park. The viewing line along Union Street East just clips the north eastern edge of the site, so that the buildings within the zone will not be clearly apparent until nearly upon the site. Similarly, the buildings will not be visible along Anzac Avenue until shortly before the Water of Leith Bridge is reached. The site will be visible along the whole length of Minerva Street, across the Water of Leith. The stadium building will close the view along Parry Street when approaching from the west. The realignment of SH88 will require the removal of existing industrial buildings in Parry Street. This will permit a view of the stadium across the railway lines, the new SH88 and the car park from all of the boat harbour. From the east the stadium will be visible, across the car park, from the point where the realigned SH88 joins Ravensbourne Road. As the university buildings will be lower in height than the stadium they will be screened by the stadium when looking from the east. Views of the elevations of the university buildings will be possible from Anzac Avenue, Logan Park and from Minerva Street, where they will be seen in conjunction with the stadium building.

9.2. The stadium will be by far the largest building in the vicinity and will provide a dramatic change to the existing outlook from surrounding streets and spaces. Although the scale of the stadium will be monumental it will be

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located in an area of predominantly large scale uses. The building will be seen across a spacious foreground, that is Logan Park, the new plaza, the Water of Leith or the car park, so that although the contrast in scale will be dramatic, it will not be overbearing.

9.3. Due to the alignment of streets, the flat topography and intervening buildings, the stadium will not be visible from the Octagon and the section of the central city between it and the site. This means that the sudden appearance of the stadium when nearing the site will create a striking element of surprise.

9.4. Similarly, when approaching from the north east, the stadium will be obscured by the topography until the last moment. Encountering the stadium will signal the entrance to the city. The dramatic scale and iconic design of the building, will ensure that this a clearly recognizable and memorable 'gateway'.

Distant views

9.5. The stadium building will be a large mass and due to its location will be a significant feature in the Dunedin townscape. In order to understand how the bulk of the building will appear in the townscape, the height of some existing buildings was ascertained. See Table 1 below. Of these, the public hospital is the most comparable in height to the proposed stadium, although of a different form.

TABLE 1: HEIGHT OF EXISTING DUNEDIN BUILDINGS

Building	Height	Comment
Cement Silos (Holcim), Fryatt Street	31.55 metres	Adjacent to waterfront, a prominent landmark
First Church, Moray Place	54 metres to top of spire	Visible from many locations but not prominent due to its narrow form
Otago House, corner of Moray Place and Princess Street	31.75 metres (excluding plant room on roof)	
Westpac Building, corner of Moray Place and George Street	31 metres (excluding plant room on roof)	
Dunedin Public Hospital, Cumberland Street	c. 40m (excluding plant room on roof)	A bulky building prominent in the wider townscape

9.6. The footprint of the proposed stadium building is a rectangular shape roughly equivalent in dimensions to one and a half standard central city street blocks, such as the area bounded by Cumberland Street, Frederick Street, Grange Street and Hanover Street.

9.7. The existing panorama of the harbour is a composition of the water surrounded by buildings of various heights, streets and hard surfaces, green spaces, trees, and hillsides. The colours of the scene are generally muted,

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off white, grey, green, with some terracotta coloured roofs and red brick buildings. Some features stand out more than others such as the Holcim Cement Silos on the harbourside, the public hospital, the spires of churches and latterly the orange coloured 'big box' home improvement store.

9.8. The stadium will be visible from many vantage points around the city. The degree of visibility from any given location will vary according to the distance from the site, the angle of the view, intervening buildings and vegetation and weather conditions. In order to assess the potential impact of the stadium the site was photographed from a number of publicly accessible locations see Map 1 and Tables 2 and 3 below.

MAP 1: CLEAR VIEWING POINTS

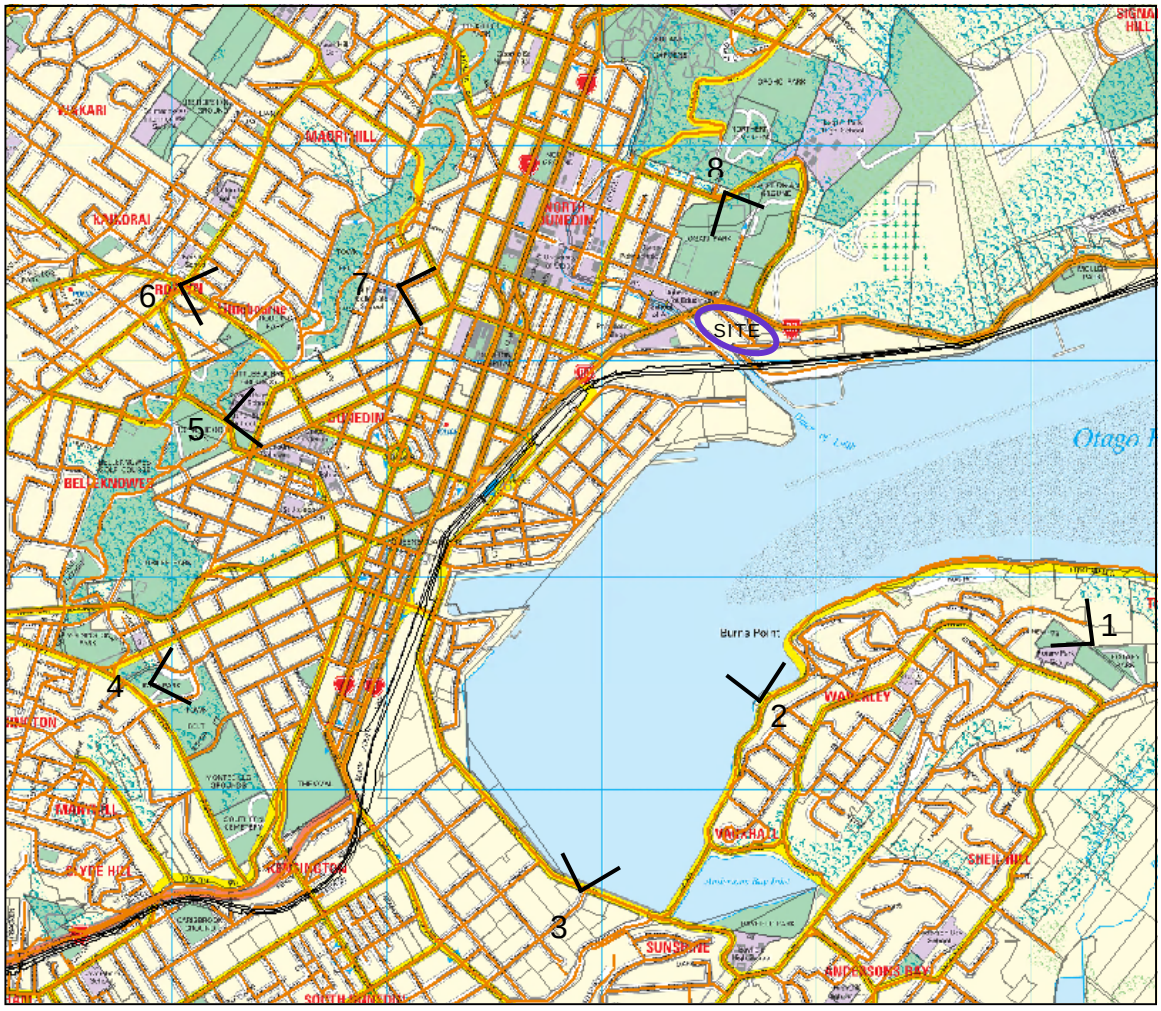

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TABLE 2: CLEAR VIEWING POINTS

	Location	Comment
1	Rotary Park	Clear, distant elevated view
2	Vauxhall Reserve Portobello Drive	Eye level view across the water
3	Junction of Portsmouth Drive and Teviot Street	Eye level view across the water
4	Unity Park	Clear, distant elevated view
5	Queens Drive/City Road	Semi-obscured, elevated view
6	Highgate overbridge	Elevated view
7	Cobden Street	Elevated view
8	Dundas Street	Slightly elevated, relatively close view across playing fields

TABLE 3: OTHER VIEWING POINTS

A	Corner of Scobie Road and Doon Street	Elevated view between houses
B	Jubilee Park	View partially obscured by trees
C	Pacific Street	Partially obscured view
D	Tolcarne Street	View partially obscured by trees
E	Union Street West/Queen Street junction	Site obscured by University buildings
F	Union Street East	Only edge of site visible
G	Clyde St/ St David Street	Slightly elevated, relatively close view across playing fields
H	Signal Hill lookout point	Site not visible

9.9. Photographs of the views taken from the eight clear vantage points (1-8) are included as Appendix 1, Part 2. On each is superimposed an outline of the proposed stadium building. The stadium will be clearly visible as a distinctive element in the townscape. It will be the largest building around the harbour's edge and will become a landmark feature. Its position at the northern end of the central city at the foot of Signal Hill means that it will be seen as an end stop to the waterfront, rather than a central focal point, as the Holcim tower is. It will be seen, from a distance, against the backdrop of the water and the hillside.

9.10. The points from which the site can be seen in its entirety are all some distance from the stadium and elevated. Although the building is massive, it will not appear as large as some buildings which are located closer to the viewing point, such as the public hospital (see photograph from vantage point 7).

9.11. The major part of the roof and the sides of the stadium, although transparent at close quarters will be semi opaque from a distance and will probably appear similar in colour to horticultural tunnel houses. The overall composition of the stadium building will therefore be shades of grey. This will harmonise with the surrounding townscape and the water and hillsides beyond.

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9.12. The inclusion of signage on the building could introduce a jarring element in the townscape. Signage will be necessary to identify the building, but this should not need to be read from around the city, only at close quarters. The distinctive size and shape of the building will be sufficient to identify it.

9.13. At night time, when matches or events are in progress the stadium will be internally lit and the light will be diffused by the ETFE roof. It is anticipated that the stadium will appear as an area of glowing, rather than bright light. It will be clearly visible from many points around the city and so will be a major, but occasional feature in the 'nightscape'. As such, it is likely to be an element of interest, adding variety to regular views. The glow from the Macmillan artificial turf and Forbury Park racecourse can currently be seen after dark.

10. Linkages[4]

10.1. The proposed zone is within walking distance of the Octagon (20 minutes) and the university (10 minutes) and there is a variety of routes that can be followed. All of these routes will reach the frontage of the site at Anzac Avenue where the entrances to the university buildings and the principal entrance to the stadium will be reached across the proposed public plaza. The realignment of SH88 will reduce the traffic using Anzac Avenue and Union Street East, so that they become quieter collector roads. This provides the opportunity for easier pedestrian flow between the existing university campus and Logan Park and the new plaza, the new university facilities and the stadium. The physical connection could be enhanced with unified surface treatment and planting and narrowing of the Anzac Avenue carriageway. The north western portion of the stadium/university complex will be freely accessible with no boundary fencing. Elsewhere fencing may be required for traffic safety or security reasons.

10.2. The Water of Leith and the railway line form barriers to movement along the south west and southern boundaries of the zone. They do however, afford clear visual links. The realignment of SH88 will further segregate the site from the waterfront. New physical linkages will need to be formed to connect the site to its surroundings. Recommendations for providing these have been included in the transport impact assessment report. A new vehicular access is recommended from the boat harbour to SH88 (realigned). Pedestrians and cyclists will be able to travel from the waterfont along this road to SH88, where crossing facilities will be provided. From there the route to the university will run along the edge of the stadium car park, alongside the north eastern edge of the stadium, then onto Union Street East or Logan Park via the plaza and new university buildings. This walk will be more pleasant than the current route through the industrial area and over or under the railway line at Magnet Street. An alternative route is proposed from the western end of Magnet Street, across the Water of Leith by means of a pedestrian cyclist bridge clipped on to the railway

[4] For detailed explanation of vehicular, pedestrian and cyclist links see Beca Infrastructure Ltd. Proposed Spectator Events and Education Zone, Transport Impact Assessment, 2007.

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bridge and then via an underpass under the railway line through to Minerva Street. This route is likely to be perceived as less safe, but has the potential advantage of being alongside a beautified Water of Leith and a view of the harbour and the city along the Water of Leith will be afforded from the bridge.

10.3. The new SH88 road bridge across the Water of Leith should allow for pedestrian and cyclists to access the stadium site from Minerva Street.

10.4. The opportunity will be created to form an attractive pedestrian and cyclist link from the waterfront, to the university alongside the Water of Leith. This will require beautification/naturalisation of the waterway between the railway line and Forth Street, enhancement of the Minerva Street frontage, and creating a formal pathway connection through the university campus between Anzac Avenue and Forth Street.

11. Interfaces with the surrounding area

11.1. The way in which the edges of any development within the zone are treated will be vitally important. Sensitive interfaces will create a human scale at the local level and knit the complex into the wider urban fabric.

11.2. With Anzac Avenue and Union Street East

A plaza will be located at the north western end of the zone. This will provide a foreground for the university buildings which are intended to 'sleeve' the west elevation of the stadium. At ground level there will be student facilities such as a café and a medical centre as well as entrances to the upper level teaching spaces. The main entrance to the stadium will also be along this elevation. These activities will help to enliven the space and screen the expanse of the stadium façade with architecture of a more human scale.

11.3. With the Water of Leith

This elevation of the stadium is long (190m) and high (up to 55m). Its bulk will need to be broken up with windows/openings or other architectural features, otherwise it will appear as a monotonous blank facade. The building will be set back approximately 5 metres from the Water of Leith. Due to the orientation of the building this 5m strip will be in the shade for most of the time. The site of the university buildings and the plaza adjoins the north eastern bank of the Water of Leith adjacent to Anzac Avenue. Those parts of the plaza and/or the buildings which are adjacent to the water, will need to be designed to address the water and not turn their back to it. Any fencing along the water should be visually permeable.

11.4. With the realigned SH 88

The realigned SH 88 will run to the south east of the stadium adjacent to the proposed public car parking area. The east elevation of the stadium will comprise the ETFE roof down to first floor level. An entry foyer will be situated in the centre of this building and there will be entrances to the stadium at each end of this elevation. This end of the building will be seen in its entirety across the car park and from SH88. Trees alongside SH88 and

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within the car park will add interest to the view of the lower part of the building. This is a secondary elevation, but the level of visual variety and ground level activity is sufficient to integrate the built form with its surroundings, i.e. it does not turn its back on the road or the waterfront.

11.5. With Union Street East and Logan Park

The lower height north stand will have its back to this edge. The translucent ETFE covering will allow an interesting skeletal view of the structure of the building. At ground level, there will be a large triangle of land between the stadium and Ravensbourne Road, which provides scope for a variety of temporary uses such as overflow car parking, additional gathering space on event days, or future expansion of stadium or university activities. The stadium edge at this point will house space for temporary food and beverage operations and toilets on the ground floor with offices above. The detail of the ground level façade will need to be carefully handled to avoid unsightly backs of operations being highly visible. This space provides the opportunity to enhance the visual and physical experience of this stretch of Ravensbourne Road. Landscaping and tree planting along the north eastern boundary of the site will be necessary to provide a good quality edge to complement the Logan Park frontage.

12. Safety[5] and comfort as a pedestrian environment

12.1. The new stadium and university complex will need to feel safe and comfortable both on match/event days and on a day to day basis. On match/event days there will be a sense of occasion, crowds of people will be moving towards the building and milling around on the plazas and car park. The outdoor spaces are large and the sheer numbers of people and the presence of security personnel will help to ensure that people feel safe. Pedestrians will be converging on the stadium site from the industrial and port area to the south, having parked their cars or alighted from buses and taxis. This may cause a pinch point as they pass under the railway line and SH88 and over the Water of Leith.

12.2. On non-match days the complex will take on a different feel, with fewer people around. The design of the ground floor edges of the stadium, the university buildings and the surrounding outdoor space is to be more intimate in scale than the monumental scale of the stadium. This will create an environment where people do not feel overwhelmed by the scale of the buildings and spaces when there are fewer people around (i.e. people will not feel exposed and vulnerable in a vast open space).

12.3. The plaza will need to cater for large numbers of people as well as when there is less activity. This is to be achieved by subdividing the hard surfaced plaza space with soft landscaped areas, including raised parterres, to create a sense of intimacy.

[5] Considered layout and design of buildings and spaces can help prevent crime. See Ministry of Justice, National Guidelines for Crime Prevention through Environmental Design in New Zealand, November 2005.

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12.4. The design of the university buildings and the plaza will need to be such that the outdoor space receives ample sun as well as shade and is sheltered from the prevailing westerly winds in winter and north easterly and south westerly in summer. The location of the plaza at the north western end will mean that the shading of the space by the stadium building will be kept to a minimum.

12.5. Users of the site will need to feel safe. Places are safer when there are people around and the space is overlooked from surrounding buildings. University activities will enliven the western end of the site with students walking to and fro across the plaza. The university buildings will overlook the plaza providing casual surveillance. Entrances and activities at ground floor level will provide an active edge to the plaza. The stadium car park will be at the rear of the complex and casual surveillance will not be afforded from the stadium building. However, the car park will be overlooked from SH88. The north western edge of the site will be overlooked from Logan Park and Ravensbourne Road.

12.6. The north eastern edge of the Water of Leith adjacent to the stadium will be shaded by the south stand for most of the time. The space will not be overlooked from the stadium, except when there are matches or events occurring. It will therefore be preferable not to encourage pedestrians along this portion of the water's edge when the stadium is not in use.

12.7. Crossing the railway line and SH88 by means of an underpass could feel unsafe and be a place of entrapment, unless the underpass is wide, open and well lit. An overbridge would feel more safe and provide a view of the stadium and harbour, but has the disadvantage of being a longer, more strenuous route.

13. Urban design protocol assessment / Positive impact of the proposal

On the assumption that both a stadium and university buildings of the form described in the Architect's Design Statement are constructed in the zone and having analysed the impact of the proposal it is now possible to assess it in relation to the seven design qualities which the New Zealand Urban Design Protocol identifies as essential for creating good quality urban design. This exercise describes the positive effects of the proposal.

13.1. Context

Due to its magnitude and location the stadium/university complex will become one of the landmarks that structure the urban form of Dunedin. The stadium building will be an identifiable element in the wider townscape and has been designed to harmonise with its setting, through building form and colour, so that it is picked out as a positive feature and not as a discordant one. The development site in its current state does not relate well to its surroundings. The new complex provides the opportunity to improve this context. The stadium building will provide a dramatic backdrop to Logan Park, and enclose and define the playing fields. The new plaza and university facilities will create an eastern gateway to the university campus, expanding the existing campus and at the same time providing a context for

the stadium. The redevelopment will improve the visual relationship between the site and both the Water of Leith and the harbour.

13.2. Character

The proposed development will create a new character for the site, although it will preserve something of the expansive scale of existing operations. The western end acknowledges and builds upon the character of the university campus. The new plaza will introduce a grand and distinctive civic space to this part of the city. The stadium building with its dramatic roof will become instantly recognisable as a symbol of Dunedin. The opportunity exists, through the redevelopment of this site, to upgrade the character of this stretch of the Water of Leith.

13.3. Choice

The proposal is a good example of a mixed use development with a variety of uses providing for a sizeable range of interest groups, such as students, sports fans, concert goers and those attending exhibitions, conferences and other events. In addition there are a number of 'flexible' spaces which can be adapted to varying demands over time. The plaza will provide a multi-purpose space, readily accessible to the general public as well as those using the site on a day to day basis.

13.4. Connections

The complex will be well connected to the road network with direct access, via Ravensbourne Road from the relocated SH88. Due to its location in close proximity to the university and the city centre, the site will be within walking or cycling distance or accessible by public transport for many users. New or improved pedestrian and cyclist connections will be needed across the Water of Leith, the railway line and SH88. Strong physical and visual connections between the existing university buildings and Logan Park and the western end of the site are intended and will be facilitated by the decrease in traffic on Anzac Avenue and Ravensbourne Road. Once on the site, there will be the opportunity for people to walk around, meet and gather in and around the stadium and university buildings, both in organized and unorganized situations.

13.5 Creativity

Stadium buildings by their nature are inward looking, large, plain structures, used intermittently. The combination of spectator events and educational activities within the zone enables the outdoor environment to be enlivened by the daily activities of the university. The smaller scale, more intricate university building forms can be used creatively to provide an interesting and active 'sleeve' to the monolithic stadium building and an active edge to the plaza. On other elevations creative use of changes in building material, colour and texture and architectural features will be needed to articulate the facades. The distinctive shape of the roof and the use of the ETFE covering help to turn a functional building into a memorable one. There is the opportunity to incorporate public art into the buildings and spaces of the complex.

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13.6. Custodianship

The development of the stadium/university complex enabled by the new zone provisions will upgrade and intensify the use of what is now a run down and underutilised area close to the Dunedin waterfront. It is the intention that all new construction complies with best practice stormwater management (low impact urban design and development (LIUDD) principles) and sustainable building principles. Attention will need to be paid to the detailed design to ensure that the spaces and places created, feel safe. Many more people will be drawn into this locality, particularly on match/event days, but also on a day to day basis. This new level of activity could help to regenerate adjacent areas, particularly the educational and industrial area around Parry and Minerva Streets to the west. Having a generator of activity at this end of the harbour could act as a catalyst for upgrading the Water of Leith and connections to and along the waterfront.

13.7. Collaboration

This proposal is a good example of a collaborative project, with Dunedin City Council, the Carisbrook Stadium Trust, the University of Otago, Otago Regional Council and other stakeholders working together to achieve a mutually beneficial vision. A multi-disciplinary technical team is progressing the project. The community will be involved in the decision making through the Plan Change process.

14. Worst case scenario

14.1 It is possible, but unlikely, that the buildings envisaged and assessed in this report and provided for by the zone will not be constructed as planned. The content and format of the University facilities are evolving. Therefore the situation needs to be considered whereby the Plan Change is approved and becomes operative, but the proposal does not proceed as currently intended.

14.2. The Plan Change will limit the range of uses permitted in the zone. However, in the absence of any specific controls, the content, layout, form and appearance of the development could be markedly different from that currently intended.

14.3. Although the demand for University accommodation is limited at present, there could be a desire for more space in the future. With no District Plan limitations the University could occupy all of the area intended as a plaza. The buildings could be of unlimited height. They could be poorly related to the surrounding street and the Water of Leith.

14.4. The plaza could be omitted from the development or it could be uncomfortable and feel unsafe. Alternatively, the space to the west of the stadium could be utilised for car parking.

14.5. While there is little scope to adjust the footprint of the stadium, since it is determined to a large degree by the size and shape of the pitch, it would be possible to move it back further on the site. This would interfere with the efficiency of the car parking provision and is unlikely to occur.

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14.6. The design of the outside of the stadium could change markedly however. While the maximum height of the primary building is unlikely to exceed that proposed, the roof shape could be different. The stadium could be built without a roof. There could be floodlights projecting above the stands. The colour, texture and reflectivity level of the building materials could change. There could be little to enliven the edges of the building.

14.7. The situation could arise whereby the university buildings do not eventuate. This would leave the stadium immediately adjacent to the plaza, in which case the creation of an active edge to the plaza would be more problematic. Furthermore, the plaza could also be omitted leaving vacant land between the stadium and Anzac Avenue.

14.8. The changes outlined above need not have an effect that is significantly different from the current proposal. Nevertheless it is possible, as a worst case scenario, that a massive, windowless, 'big box', stadium, finished in blue and gold and surrounded by a sea of car parking could eventuate. Such a development would have an adverse effect both on the immediate environment and the wider townscape.

14.9. It is also conceivable that the stadium does not proceed and only the educational facilities are developed on part of the site. Such a scenario would still be likely to have a positive effect on the existing environment.

15. Recommended District Plan provisions

15.1 It is inadvisable to draft a Plan Change too tightly around a specific design proposal, since undoubtedly changes will need to be made as the scheme progresses. Necessary, often advantageous, changes can be stymied by inflexible plan provisions. The objective of any plan provisions should be to control the effect of any proposal, not dictate its precise form and appearance. The conditions listed in paragraph 15.6. below are recommended as necessary to ensure that any development that occurs within the zone does not have an adverse environmental effect. Where they are quantifiable they can be included as rules, otherwise they will be in the form of design criteria.

15.2. It should be recognized that it is never possible to devise District Plan provisions that guarantee good urban design. The developers, their architects and other consultants must be relied upon to deliver a high quality development, with rules and assessment criteria providing the framework.

15.3. The mass of the stadium building is likely to be the most significant and controversial design aspect. Controls on both the height and the site coverage of the building will be needed to restrict the building mass.

15.4. Examination of the proposal in relation to its context in section 9 above, leads to the conclusion that this site could satisfactorily accommodate a taller building than exists elsewhere in Dunedin. Nevertheless there is a limit

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to the height of building that would be congruent with its setting. There is unlikely to be a precise point at which the difference between congruency and incongruency occurs, but a precise figure is needed for District Plan purposes. The photographs (Appendix 1, Part Two) show that a building of the magnitude proposed would be acceptable in the townscape. An increase of a few metres in height would be imperceptible, either from a distance or at close quarters. An increase of say 20 metres would be discernible and may or may not be acceptable, whereas a height of say 100 metres would definitely be overly dominant. Therefore a maximum permitted height is recommended that is not much higher than the highest point of the current proposal. It may be that a higher element to the building would not have an adverse effect, but this could be judged through a resource consent process.

15.5. The maximum site coverage of the stadium will be largely restricted by the size of the pitch and the space required for vehicle parking and maneouvring. Nevertheless it is possible that it could occupy more of the site than intended. The restriction of the footprint of the stadium could be ensured by requiring that the western part of the site be set aside for outdoor public space and educational purposes.

15.6. <u>Recommended conditions to be met through rules and design criteria</u>

1. No part of any building to be higher than 60m.
2. The stadium to be finished in natural colours, harmonious to the landscape, such as grey tones.
3. The exterior of the stadium to be constructed of materials that are not highly reflective.
4. The facades of the stadium to be designed to mitigate the adverse effect of large blank walls, by means such as: architectural features (e.g. columns, indents, applied elements); strategic use of colour; the arrangement of solid walls and openings; changes in texture or patterns.
5. Controls to be imposed on the location and size of signage, so that it is not unnecessarily obtrusive.
6. The site to be generally open and unfenced except where necessary for traffic safety, stadium security and access control.
7. The stadium and associated car parking not to occupy at least one hectare at the north western end of the site.
8. Outdoor public space of at least 6000m² to be included in the redevelopment at the north western end of the site.
9. The outdoor public space to be designed to reinforce the visual and physical connection across Anzac Avenue and Union Street East to the College of Education, University of Otago and Logan Park.
10. The outdoor public space to be designed to create a sense of arrival when approaching along Anzac Avenue and Union Street East.
11. Any part of the outdoor public space which is adjacent to the Water of Leith should be designed to relate to it.
12. Buildings and activities to provide an active edge to the outdoor public space.
13. The outdoor public space to cater for a large gathering of people.

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14. The outdoor public space to work at a secondary scale, through subdivision of the larger space into smaller places.
15. The outdoor public space to be designed to take account of the prevailing winds (westerly in winter, north easterly and south westerly in summer).
16. The outdoor public space to have a civic presence and a sense of identity.
17. The outdoor public space to include a combination of hard landscaping and planting to structure the space.
18. Buildings on the outdoor public space to be designed so that they do not unduly overshadow the outdoor public space.
19. The design of the outdoor public space to adhere to the principles of crime prevention through environmental design (CPTED), e.g. well lit, overlooked by adjacent buildings to permit casual surveillance, no places of entrapment.
20. The car park to be planted with trees and ground cover around the perimeter and between the car parks.

16. Conclusion

16.1. The proposed Spectator Events and Education zone will facilitate a major building project which provides the opportunity to make a positive contribution to the built heritage of the city. The built form, as proposed, will be a distinctive and iconic presence in the Dunedin townscape. This is fitting, as the most prominent buildings in the city should be those of civic importance, which the community can be proud of.

16.2. This location is appropriate for the stadium and university buildings. The urban fabric and existing environment is such that a complex of this monumental nature can be physically absorbed. The proposal is likely to have a positive effect on the existing environment and its surrounds.

16.3. The stadium building will not impact on the enjoyment of residential areas, since the nearest residential uses are some distance from the site. Instead the site is bordered by less sensitive large scale educational, leisure and industrial uses.

16.4. The larger stadium building stands in the centre of its site and is viewed across open foregrounds. Therefore it will read as a stand alone piece of architecture in its own setting, flanked by the smaller university buildings to the west, and will not overpower or infringe upon other buildings and spaces.

16.5. The site will be visible from many longer range vantage points, but because of the intervening distance the scale of the stadium will be diminished.

16.6. The stadium will be well linked visually and physically with its surroundings, as long as direct, attractive and safe pedestrian and cyclist links are provided across the Water of Leith, across the railway line, across SH88 and between the site and the boat harbour

16.7. Provisions will need to be included in the Dunedin City District Plan Change to ensure that the design principles of the current proposal are upheld.

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