CHAPTER 4

STADIUM LANDSCAPES

04.01 INTRODUCTION

This chapter will deal with the stadium landscape and the requirements of such a landscape. The current Loftus Versfeld Stadium landscape will be analysed in terms of the necessary requirements and a proposal will be given of what is deemed necessary for this specific site.

04.02 STADIUM LANDSCAPE AND MASTERPLANNING

"A sports stadium can be seen as a huge theatre for the exhibition of heroic feats. It is this combination of dramatic function and monumental scale", Populous Design Firm.

HISTORY AND CONTEMPORARY BACKGROUND ON STADIA

Stadia in Ancient Greece were carved out of the earth and blended in with the landscape. One of the greatest examples of stadium design, is the Colosseum in Rome, also known as the Flavian Amphitheatre. Construction took place in the first century for 12 years. The stadium could accommodate 48 000 people - this capacity was not exceeded until the 20th century (John et al., 2013:5). As Christianity and church design became the focus during the Renaissance, competitions were held in town squares or open fields with temporary stages and covered areas for spectators (John et al., 2013:6).

Stadium as building type has only revived after the Industrial Revolution when a revival of the Olympic tradition occurred (John et al., 2013:6) - *together with population growth and urbanisation* (see Chapter 1).

In the last decade and a half, sport has been dramatically been codified and professionalised. A dramatic growth of urbanisation has also occurred, where populations are moving from the countryside to the city. Possibly, the dramatic process of urbanisation and the new urban community could be the reason why sport has become so popular (John et al., 2013:21). Sport like rugby, cricket, soccer, American football, baseball and tennis became great activities and the demands for facilities increased (John et al., 2013:6).

After the Cold War, stadia were seen as "icons of newborn societies, signifying a break with the recent past and undesirable national traditions" (Katzer, 2010:249). Sport architecture changed the look of the city, by dominating the urban landscape. Sport architecture was to symbolize the culture by which it was created (Katzer, 2010:249). Stadia have become: "an essential ingredient of the urban matrix that binds our cities together. They are arguably the most viewed building type in history thanks to the Olympics and other global sporting events. They can change people's lives and often represent a nation's aspirations" (John et al., 2013:21).

Even though stadia are quite expensive, they can also create a good revenue. Sport has become the first truly global cultural activity and the financial power of sport, in general, is increasing. Stadia have great power as a planning tool and are therefore an important building type (John et al., 2013:21). Stadium as building type, has evolved to have all the elements that "sustain independent city life" such as retail, commercial, leasure and residential. These elements work together, also with other services such as the transport infrastructure, to make the contemporary or future "stadium city" thrive (John, et al., 2013:21).

As described above, stadia play a major role in our cities. Loftus Versfeld has been a popular stadium since its inception in 1909 and has contributed much to the rugby community of Pretoria [Tshwane], however, due to changing social and political events, the stadium is not optimally used. Tshwane has become a multi-cultural and much denser community that needs a range of services. Loftus Versfeld is part of Tshwane's identity and therefore a multifunctional

landscape that enhances this landmark, can greatly contribute to the community as well as its well-being.

EXTERNAL MASTERPLANNING

It is important that stadia are easily accessible to its client base. Around a major stadium, transport infrastructure should offer various ways of getting to the event and leaving it again relatively fast and simple - this affects attendance and revenues (John et al., 2013:40).

Correct zoning of available land and accommodating the various facilities required within the site boundaries, are important. Not only sports facilities are included, but also facilities such as pedestrian and vehicular routes, parking areas, etc (John et al., 2013:31).

The modern stadium is designed as five concentric zones. For safety aspects, these five zones are important during the planning of a stadium (John et al., 2013:31).

Zone 1: Playing field
Zone 2: Spectator seating areas
Zone 3: Internal concourses, restaurants, bars and other social areas
Zone 4: Circulation area between stadium structure and perimeter fence
Zone 5: Open space outside the perimeter fence

Zones four and five affect the masterplanning of the landscape design.

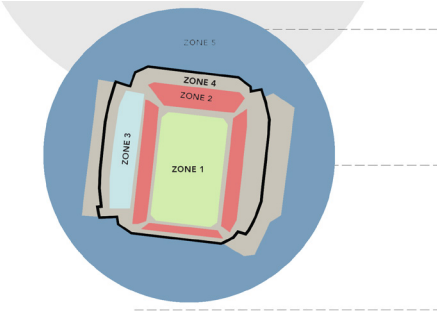


Figure 04.01: Current zoning of Loftus Versfeld stadium according to the zones described by Populous (Author, 2015)

Spectators should be able to go to areas of safety during emergency events. Zone 4 provides escape area for spectators when the outer perimeter gates are locked and the stadium management is not foolproof (John et al., 2013:30).

Zone 5 is seen as the permanent safety zone for spectators to escape to through zones 3 and 4. Roads surrounding the stadium and other open, easy accessible areas can be used as zone 5 during emergency events. This zone also provides circulation space for the spectators before events and gives them the opportunity to find their seats. This zone should also maximise opportunity for revenue generation, with an inviting surface and pleasantly design kiosks, information boards and other inviting facilities. Planting can be well incorporated into zone 5 which enhances the visual connection between the stadium and the surrounding urban environment.

Various parking spaces have to be considered in and around a stadium landscape. Parking spaces have to be efficiently accessed by cars so that traffic jams don't occur. Usually people arrive more spread out than when they leave. An option is to provide other recreational facilities that allow people to leave more gradually and thereby reducing traffic jams.

Although the focus is more and more on pedestrian and public transport users, essential parking requirements include:

- Public parking for cars should be one parking space to every 10 to 15 spectators
- Seperate VIP and private-box holders and their guests' parking.
- Buses & coaches, 1 bus per 120 spectators - however not as important in South Africa and especially Loftus Versfeld (See Chapter 3)
- Disability parking - 6% of the total car parking capacity should be allocated to people with disabilities
- Players & team buses - between 2 and 6 buses - need direct access to changing rooms without allowing contact with the public
- Directors, sponsors & stadium staff - seperate parking, clearly identified and secure with control &

closed circuit supervision - should not interfere with circulation routes used by the public.
- Media which requires about 10 parking spaces for a single event (John et al., 2013:43).

Parking zones have to be divided in blocks of roughly 500-1000 cars and should be immediatly recognisable by signage, numbering systems - different surface treatments can assist in partitioning the car park into zones. Good lighting in parking area is important as spectators usually come during daylight and leave after dark.

Signage is important not only for parking but also for spectators to find their seats on specific stands.

The routes that visitors follow from where their cars are parked to the stadium should provide kiosks where food, beverage, programmes, tickets and clothing of the specific teams are sold.

Lighting is important, however, it should not overspill and disturb residential areas around the stadium (John et al., 2013:45).

Materials chosen for surface have to be selected to minimise maintenance, look attractive and offer a good walking surface (John et al., 2013:45).

Planting is a good tool to reduce the problem of scale and can break the harshness of possible unfriendly-looking finishes that are often associated with sports stadia. Planting can be so dense, that one could be right next to the building without even seeing it - next to the western stand at Loftus Versfeld, Jacaranda trees line the street, and while walking there, one almost doesn't see the stadium, except in winter months when leaves have fallen. The risk is there for plants being vandalised and therefore concentrating planting in certain areas will be more effective (John et al., 2013:49).

Turnstiles for ticket taking should be provided for every 500-750 spectators. Gates for fast and easy evacuation have to be provided. An open gate of a meter's width can allow around 4000 spectators to pass through within an hour. Ticket sales must be provided on the day of events.

SUMMARY OF MINIMUM REQUIREMENTS OF STADIA

From a social perspective the following minimum requirements can be summarised for contemporary urban stadia:

1. Accessibility:
- Accessible from public transportation networks
- Bus drop-off areas

2. Facilities and Amenities:
- Clear pedestrian circulation routes
- Enough open space for large crowds to arrive and leave
- Motorcycle and bicycle stands
- Ticket buying areas
- For additional stadium revenue - local community and business groups need to be involved in events
- Telephones
- Clear signage
- Proper lighting
- Turnstiles and larger gates

3. Parking:
- Parking space for team buses/coaches
- VIP parking areas (300 VIP's), Officials, TV and Broadcasting vehicles
- Public parking areas
- Service and deliveries
- Disabled parking

4. Multifunctionality:
- Activites or features for people who come along but do not actually watch the main event
- Generate secondary spending e.g. shops, restaurants, hotels outside stadia

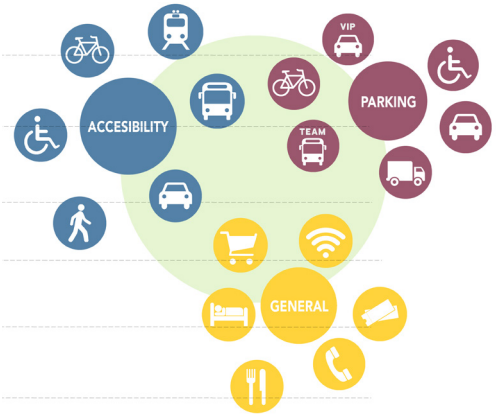


Figure 04.02: Minimum stadium requirements (Author, 2015)

A CASE STUDY (1):Nanjing Sports Park, China

Architecture Firm: Populous
Location: Nanjing, China
Client: Jiangsu Government
Year of completion: 2005
Team: Paul Henry, Andrew James, Ron van Sluijs and Matt Reynolds

The stadium was built for the 10th China National Games, which is the biggest single sporting event held in China. The challenge of the project was to design an iconic building that is an integrated part in the city and becomes a "People's Place" that in turn becomes a catalyst in the future. It would also have to provide the most public amenities in the area in order to have activity throughout the day and night.

Today, this park is extremely successful and has become a model for future sports park development in China. "Nanjing Sports Park has also demonstrated the significance that Governments are placing on the value of sport and its impact on a community. Sport can help generate goodwill among the population when developing a new city" (Populous Official Website).

Green space and public art was to be incorporated in this "Central Park". Public spaces and pathways were designed to accommodate large crowds during big sport events as well as daily users (Reynold's Urban Deisgn). Examples of activities at the Nanjing stadium include: archery, ice skating, rock climbing, horse riding, fencing, gold, rollerblading and racket sports.

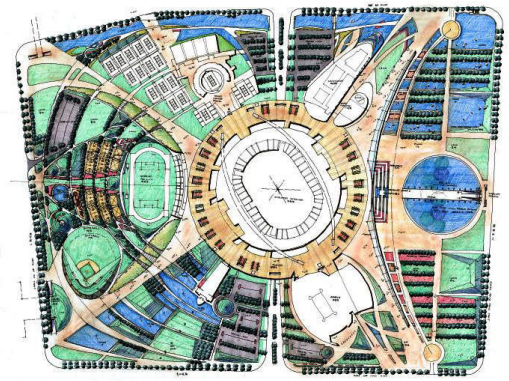


Figure 04.03: Nanjing stadium plan (drawing from Reynolds Urban Design)

Figure 04.04: Nanjing stadium Figure 04.06: Nanjing stadium (photographs from Aussie Digest Website)

A CASE STUDY (2): Moses Mabhida Stadium, Durban

Urban Design Firm: IYER Urban Design Studio
Location: Durban, South Africa
Client: eThekwini Municipality
Year of completion: 2010
Urban Design & Landscape Team: Nathan Iyer, Sean Ntombela, Glanville Jacques, Marcell Thangamuthu
Overall Design Consortium: The Ibola Lethu Consortium

Figure 04.05: Moses Mabhida stadium World Architecture News (World Architecture News, 2011)

The contemporary landscape design of the Moses Mabhida stadium emphasises multifunctionality and "public-ness". The site is situated within the urban context of Durban. A series of distinctive, both hard and soft, public spaces are designed with a legible pedestrian street network and promenades that create a link with the surrounding context (World Architecture News, 2011).

The stadium sits on a plinth in order to ensure that it becomes more integrated with the environment. The people's park at the bottom side of the park has playing fields that can be used for various other activites and leads up to the stadium, flowing towards the stadium and the structure that forms an arch over the stadium. A continuity in the landscape design approach and aesthetic exist. In terms of scale and quality, the urban design is emphasising the public environment, which resulted in a successful and sustainable precinct with ongoing use. The Moses Mabhida stadium has a line up of various world-renowned artists - Lionel Richie, for example, will soon perform at the stadium (Moses Mabhida Stadium Official Website). Every weekend a public market is held and other unique activities exist, such as: Sky Car & viewing platform, Big Rush Swing, stadium tours, Segway Gliding tours, adventure walk, visitor's centre and a people's park.

Figure 04.06: Moses Mabhida Stadium landscape (photographs from the World Landscape Architecture website)

04.02 ANALYSIS OF LOFTUS VERSFELD AS STADIUM LANDSCAPE

04.02.01 TRANSPORT ANALYSIS

- Proposed NMT Bicycle Route
- Current BRT Route & Stations
- Proposed BRT Route & Stations
- Gautrain & Metro Rail & Stations
- Gautrain Bus Route & Stops
- Road Network

Figure 04.07: Transportation Network (Author, 2015)

Figure 04.08: Transportation network summary (Author, 2015)

CONCLUSION:
Loftus Versfeld is situated between several transport nodes. Once all the proposed transportation is in place, the site is accessible and activated by various activity, it will predictably be used to its full potential.

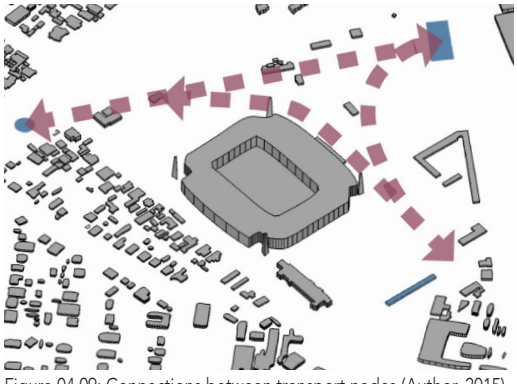
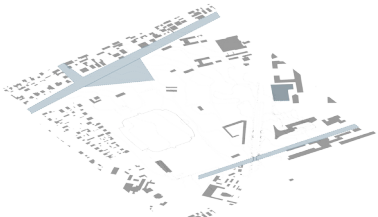
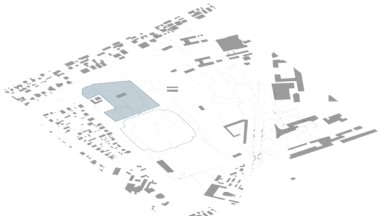
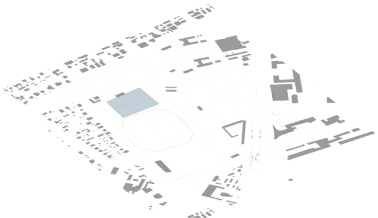
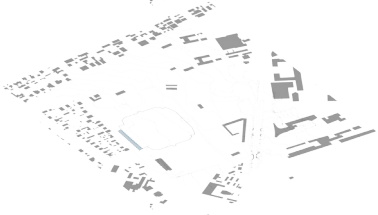
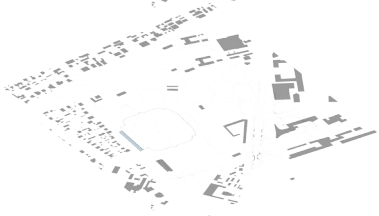
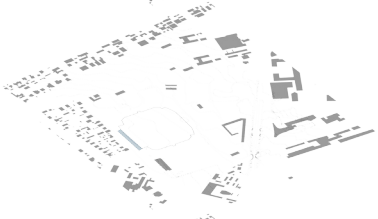
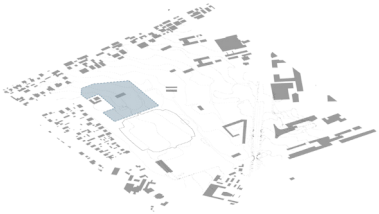
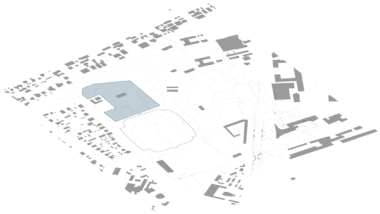
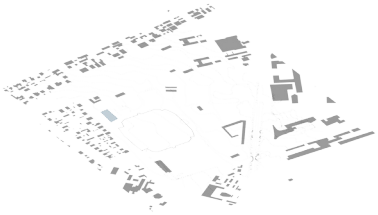
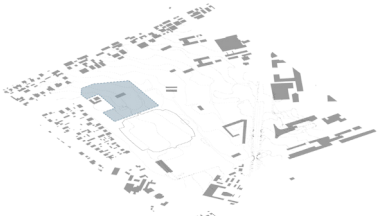
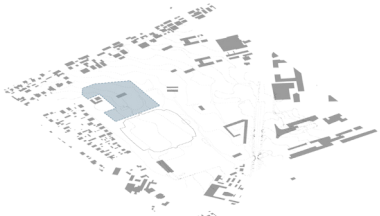
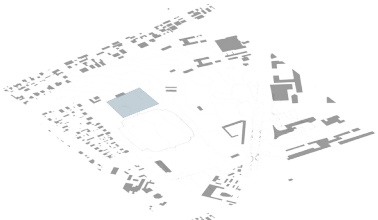
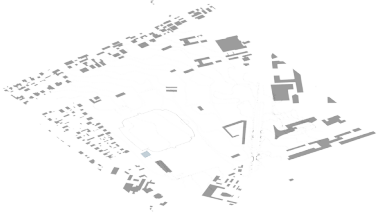
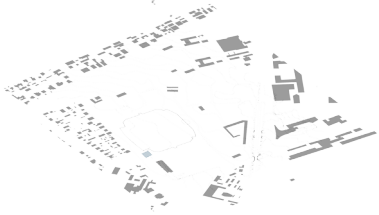
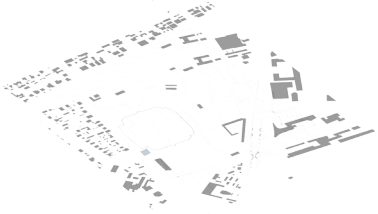
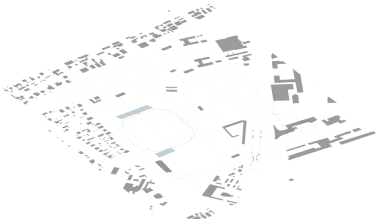
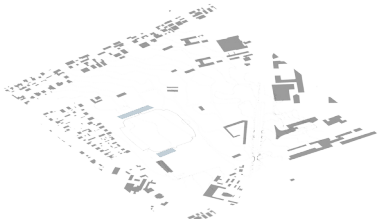
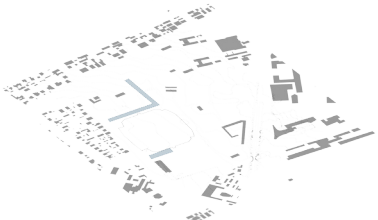
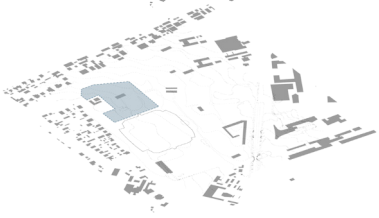
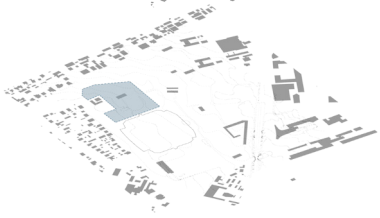
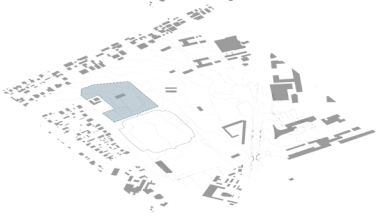
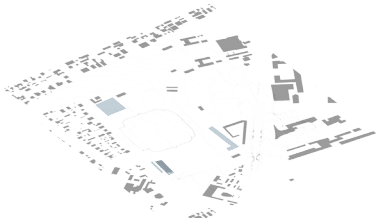


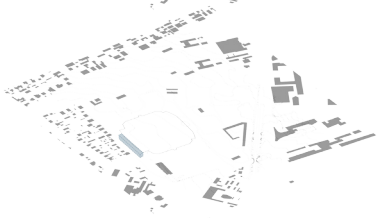
Figure 04.09: Connections between transport nodes (Author, 2015)

PARKING ANALYSIS DURING EVENTS AT LOFTUS

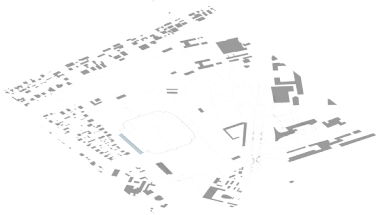
	RUGBY GAMES AT LOFTUS	SOCCER GAMES AT LOFTUS	PROPOSED LOFTUS PARK (Abland)
Spectator cars			
Team buses			
Buses & taxis			
Directors/Officials VIP's & Sponsors			
Media			
Service deliveries			
Ambulances			



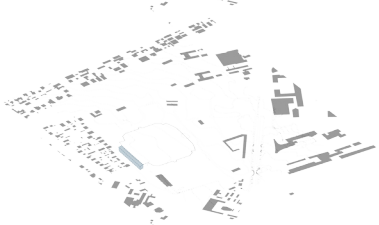
Rugby matches - parked on sidewalks
Soccer matches fewer people - on-site parking
Abland - proposes large underground parking
Proposal - underground parking under the proposed buildings & some on-street parking



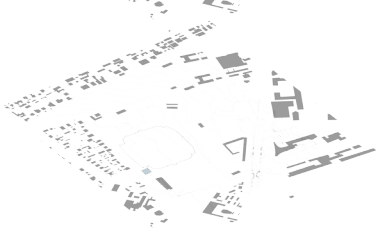
Rugby matches - within boundary wall on western side of stadium
Soccer matches - within boundary wall on western side of stadium
Abland - within boundary wall on western side of stadium
Proposal - underground parking proposed on western side of stadium



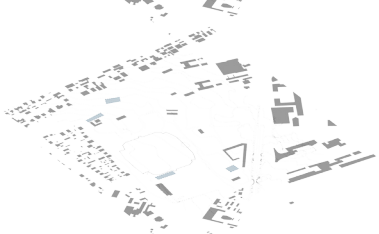
Rugby matches - only existing busstops are used
Soccer matches - buses and taxi's park on-site
Abland - nothing specific is proposed
Proposal - on street parking for buses and taxis with drop-off zones



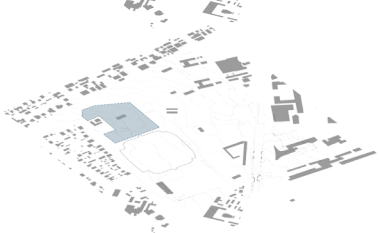
Rugby matches - on-site parking
Soccer matches - on-site parking
Abland - underground parking
Proposal - underground parking proposed on western side of stadium



Rugby matches - south-western corner of the stadium
Soccer matches - south-western corner of the stadium
Abland - south-western corner of the stadium
Proposal - south-western corner of the stadium
The corner is the best location since there is limited length of cables. On event days, the space will be temporarily fenced off



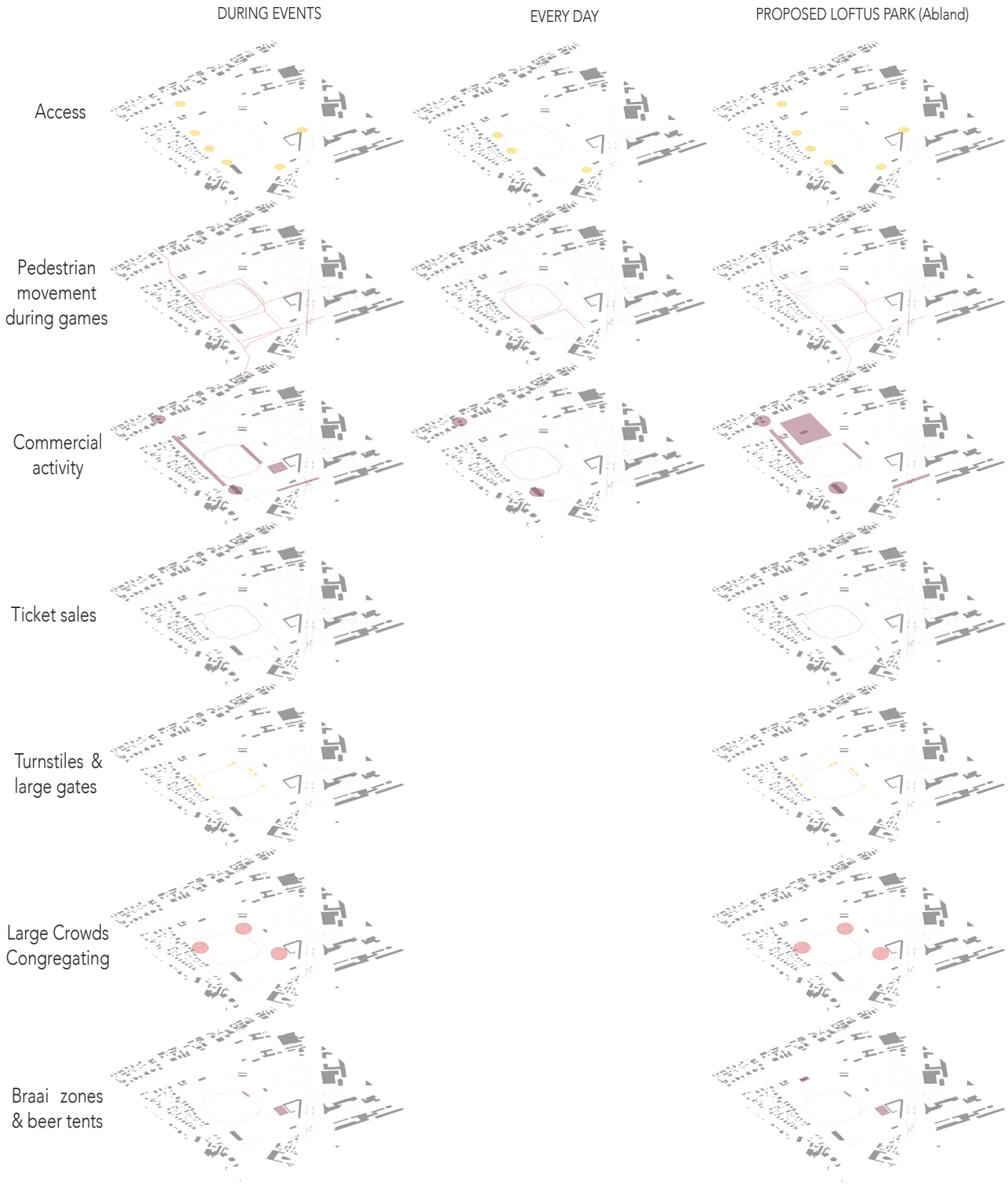
Rugby matches - north & south of stadium where most suites are
Soccer matches - north & south of stadium where most suites are
Abland - north & south of stadium where most suites are, and around the proposal is an access road for service deliveries
Proposal - north-west of the stadium, at street entrance of buildings and south of the stadium

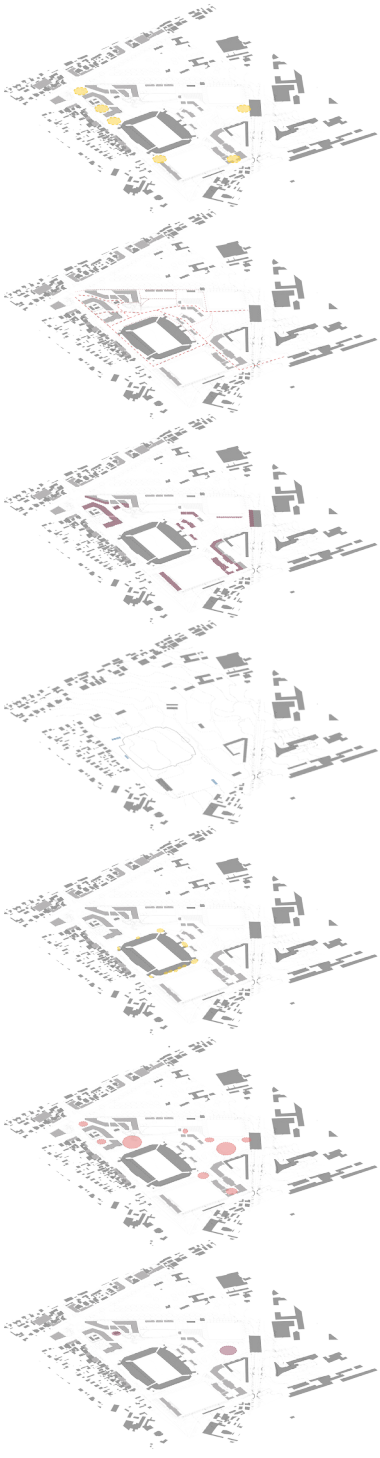


Rugby matches - on-site parking
Soccer matches - on-site parking
Abland - underground parking
Proposal - underground parking proposed on western side of stadium

Figure 04.10: Parking analysis (Author, 2015)

04.02.01 FACILITIES ANALYSIS





Events - access points through turnstiles and outer perimeter gates
Everyday - three main entrance gates are open every day
Abland - underground parking access and access on northern side of stadium to commercial activity
Proposal - open park, accessible from various points and sides

Events - pedestrians can move around the stadium and in Kirkness Street which is free from cars on match-days
Everyday - pedestrians can only move around the streets
Abland - pedestrians will be able to walk around the commercial activity on the northern side of the stadium
Proposal - open park, accessible from various points and sides with many people walking between transport nodes and using the facilities

Events - commercial activity occurs in the road reserve, at Trademarx and Eastwoods restaurants as well as a beer tent on Field D
Everyday - only the Trademarx and Eastwoods restaurants are accessible
Abland - the commercial activity north of the stadium will be open to the public
Proposal - an active urban edge in Kirkness Street is proposed and commercial activity will occur in the proposed buildings, drawing people from the edges into the site

Events - tickets are sold in containers that act as ticket offices
Everyday - stands empty with no other use
Abland - no specific proposal
Proposal - at different shops within the proposal, tickets will be sold e.g. Rugby Museum and team clothing stores as well as ticket machines on site.

Events - tickets are sold in containers that act as ticket offices
Everyday - stands empty with no other use
Abland - no specific proposal
Proposal - at different shops within the proposal, tickets will be sold e.g. Rugby Museum and team clothing stores.

Events - little space around the edges are available
Everyday - no opportunity for large crowds exist during normal days
Abland - no specific proposal
Proposal - various areas around the stadium and the proposal will provide open space for large to smaller groups to gather

Events - a beer tent and a few gas grills are available on Field D
Everyday - no opportunity for grilling (braai)
Abland - brewery proposed in the old Sin Bin building and beer
Proposal - brewery proposed in the old Sin Bin building and open lawn provide opportunity for braai and beer tent

Figure 04.11: Facilities analysis (Author, 2015)

04.03 CONCLUSION

In general, the Loftus Versfeld stadium does not meet all the identified requirements of a stadium landscape. Large crowds have little opportunitiy for activity. Routes to the transportation nodes should be emphasised and more access, parking, commercial activity, space for large crowds to gather and pedestrian movement are proposed.