THE RIVER CLUB:
OVERVIEW OF DEVELOPMENT ALTERNATIVES

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1. INTRODUCTION

This is an updated report that provides an overview of development alternatives for the River Club site. It supersedes a previous report dated July 2018.

The owner of the River Club, Liesbeek Leisure Properties Trust, is undertaking a process to apply for development rights on Erf 151832 Cape Town so that the land can be developed into a mixed-use precinct. **Figure 1** shows the locality of the proposed development and **Figure 2** shows the local context in an aerial photo.

The site currently occupied by the River Club was previously utilized by the South African Railways & Harbours (SAR&H) as the Liesbeek Park Recreation Club, which was established in the late 1920s and was subsidized by SAR&H for the benefit of its employees. The site was administered by Propnet, a division of Transnet.

The original facilities of the club were built towards the end of the 1920s, with the main building completed in 1939 (this is still the main building on the property). When Transnet activities shifted to Bellville in the 1980s, most staff moved to the northern suburbs, leading to a decline in patronage at the club. By November 1993 the property had been abandoned by Transnet and was leased to a progression of tenants.

The River Club was established in November 1993, primarily as a golf driving range, and the entire property and building was leased by a company known as Liesbeek Leisure Club (Pty) Ltd. At that time, the property was zoned “Community Facilities” in terms of the Municipality of the City of Cape Town Zoning Scheme Regulations (1990). For the initial 7 years of operation the activities for which the River Club was originally developed – the bar and restaurant, conference venue and golf driving range were considered “non-conforming uses”. However, these use rights were approved by Council in May 2001 and still apply to this day. In addition, permission to build a 9-hole mashie golf course was granted in 2002 (operation commenced in 2003).

Liesbeek Leisure Properties Trust bought the property from Liesbeek Leisure Properties (Pty) Ltd in 2015 and over the past four years the facility has been progressively improved, with upgrades of the buildings, parking area and grounds having taken place, while the golf driving range is much improved. Notwithstanding these improvements, the owners of the River Club believe that the current use of the property is not financially sustainable and is an underutilization of well-located land within the Cape Town urban area. Accordingly, they have undertaken a comprehensive process since acquiring the property to investigate a feasible development proposal for the site.

The River Club professional team has formulated a preferred development plan following an iterative design process and input from various specialists engaged in the environmental and heritage process. However, in terms of the National Environmental Management Act (NEMA), it is required that development alternatives are evaluated as part of the process. The alternatives must be reasonable and feasible, and must include one option that does not involve the granting of new development rights. This report explains and illustrates the various alternatives put forward for evaluation as part of the NEMA process (and consequently the Heritage Impact Assessment process required in terms of the National Heritage Resources Act).

* THE SITE

THE RIVER CLUB OBSERVATORY

LOCALITY

NTS

PLANNING PARTNERS

JULY 2018

Figure 1

THE SITE

THE RIVER CLUB OBSERVATORY

CONTEXT

SCALE 1:10000

PLANNING PARTNERS

JULY 2018

Figure 2

2. URBAN DESIGN INDICATORS AND RECOMMENDATIONS

2.1 Overview

In order to have a clear understanding of the rationale behind the alternatives to be presented in this document, it is important to first have an understanding of the urban design indicators and recommendations for the site.

An urban design indicators and recommendations document for the River Club site has been prepared by Urban Concepts (refer to **Annexure A**). This document contains *inter alia* the following:

- The identification of key observations and design indicators for the spatial systems of the site, the built form aspects such as scale, height and gateways, as well as aspects related to the connectivity of the site;
- Urban design recommendations for the spatial systems, heritage significance, built form components, and connectivity and accessibility; and
- A concept plan which captures the potential design interpretation of the site.

2.2 Design Indicators

2.2.1 Spatial System

Natural environment

Design indicators relating to the natural environment are listed below and are spatialized in **Figure 3** overleaf.

- Respect the required environmental setbacks from the river edges, and embrace this as an opportunity to rehabilitate the river and introduce public space to their edges, as is seen elsewhere along the Liesbeek River (i.e. including pathways and cycling tracks).

- Celebrate the Raapenberg Wetlands & Bird Sanctuary through meaningful public space adjacent to it and by setting buildings back from the edge adjacent to this public amenity.

- Respect the maximum gradient of 1:7-1:5 along riverbanks to allow their ecologies to function properly.

- Assess the impact of the physical site requirements to deal with the floodlines as an integral part of the design process, and sensitively handle the required raising of the ground level so as not to create blank edges around the development.

- Be cognizant of the convergence of the two rivers (Liesbeek River and Black River) as one of the most significant informants of the history of this part of Cape Town.

Figure 3: Natural environment design indicators (Source: Urban Concepts)

Views and view corridors

Design indicators relating to views and view corridors are listed below and are spatialized in **Figure 4** overleaf.

- Celebrate and define the view corridor to Devil's Peak (the axis of the view corridor aligns with the canal next to the Raapenberg Wetlands).
- Reference to the significant institutions (the SAAO and Valkenberg in particular) within the design process and vision for the site is important.
- Utilize the new development form to improve the experience of the river banks and Raapenberg Wetlands & Bird Sanctuary (i.e. defining the edges of the rivers and mitigating the impact – visual and noise – of the road system).

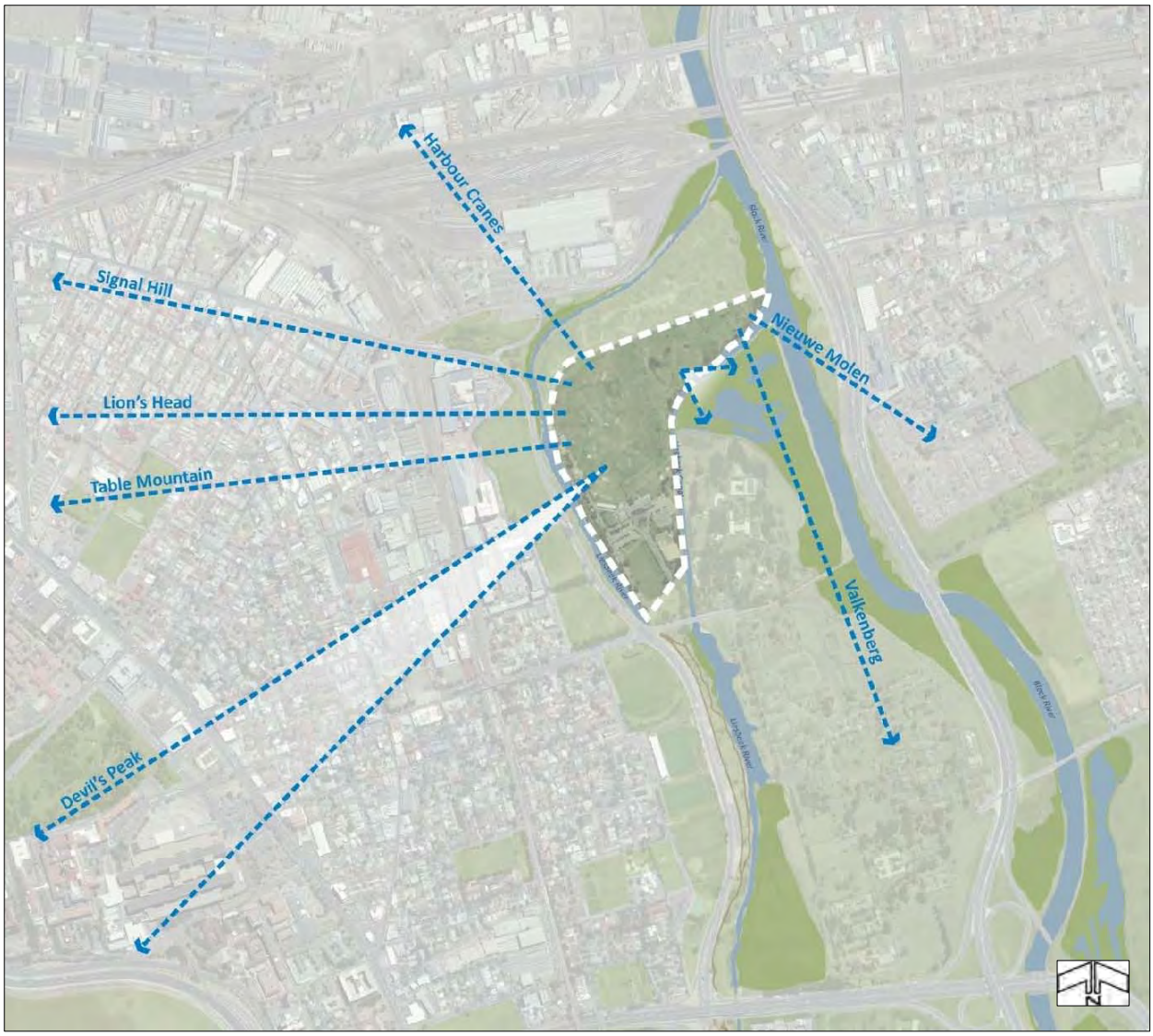

Figure 4: Views and view corridors design indicators (Source: Urban Concepts)

Public realm

The site is currently not accessible to the general public, as this is a private property. The same is true for much of the land in the immediate vicinity, which has the character of openness but is in fact largely private or institutional land and not physically accessible to the general public.

Design indicators relating to the public realm are listed below and are spatialized in **Figure 5** overleaf.

- Ensure the continuation of the walking routes beyond the site boundaries, where possible (e.g. beyond Station Road to the south of the site).
- Retain and reinforce the physical connection (creating spaces for people) with the riverine corridor and vegetated stormwater swale, as well as will the Raapenberg Wetlands & Bird Sanctuary.

- Include the experience of the Raapenberg Wetlands & Bird Sanctuary as an integral part of a continuous public space system, extending and enhancing the existing systems along the rivers.
- Recreational activities are strongly encouraged as part of the public space system (e.g. running pathways and cycling tracks), as this will bring 'feet' to the area, creating eyes on the street and spaces to assist with the security and surveillance of the public areas.

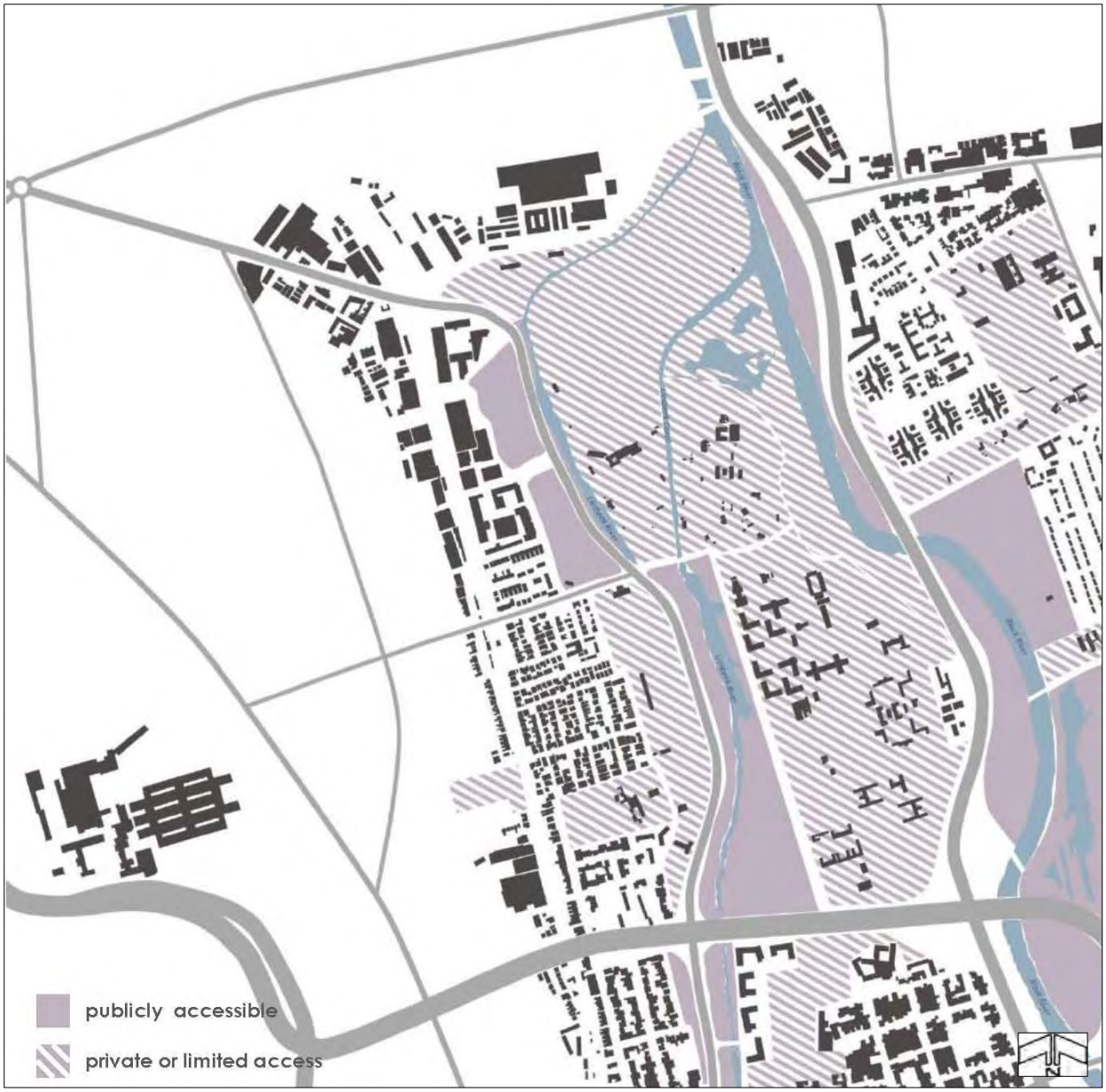

Figure 5: Public realm design indicators (Source: Urban Concepts)

Land use

The land use of the immediate surrounding areas is diverse, but beyond this, low-rise residential dominates with some office parks, schools etc. An office park (Black River Park) dominates most of the built form edge to the west of the site, with mixed uses (office, residential and light industrial) towards Salt River and Woodstock.

The areas south of the site are dominated by institutional uses. The Alexandria Psychiatric Hospital is located to the east, with light industrial beyond. The site is however very separate from the areas to the east, as the M5 highway and the adjacent Black River form large barriers.

Design indicators relating to land use are listed below and are spatialized in **Figure 6** overleaf.

- Promote a mix of uses (private and publicly accessible) on the site to complement the existing uses within the surrounding areas.
- Ensure that the various uses on the site be integrated. Avoid a repeat of isolated land uses (e.g. gated office park models).

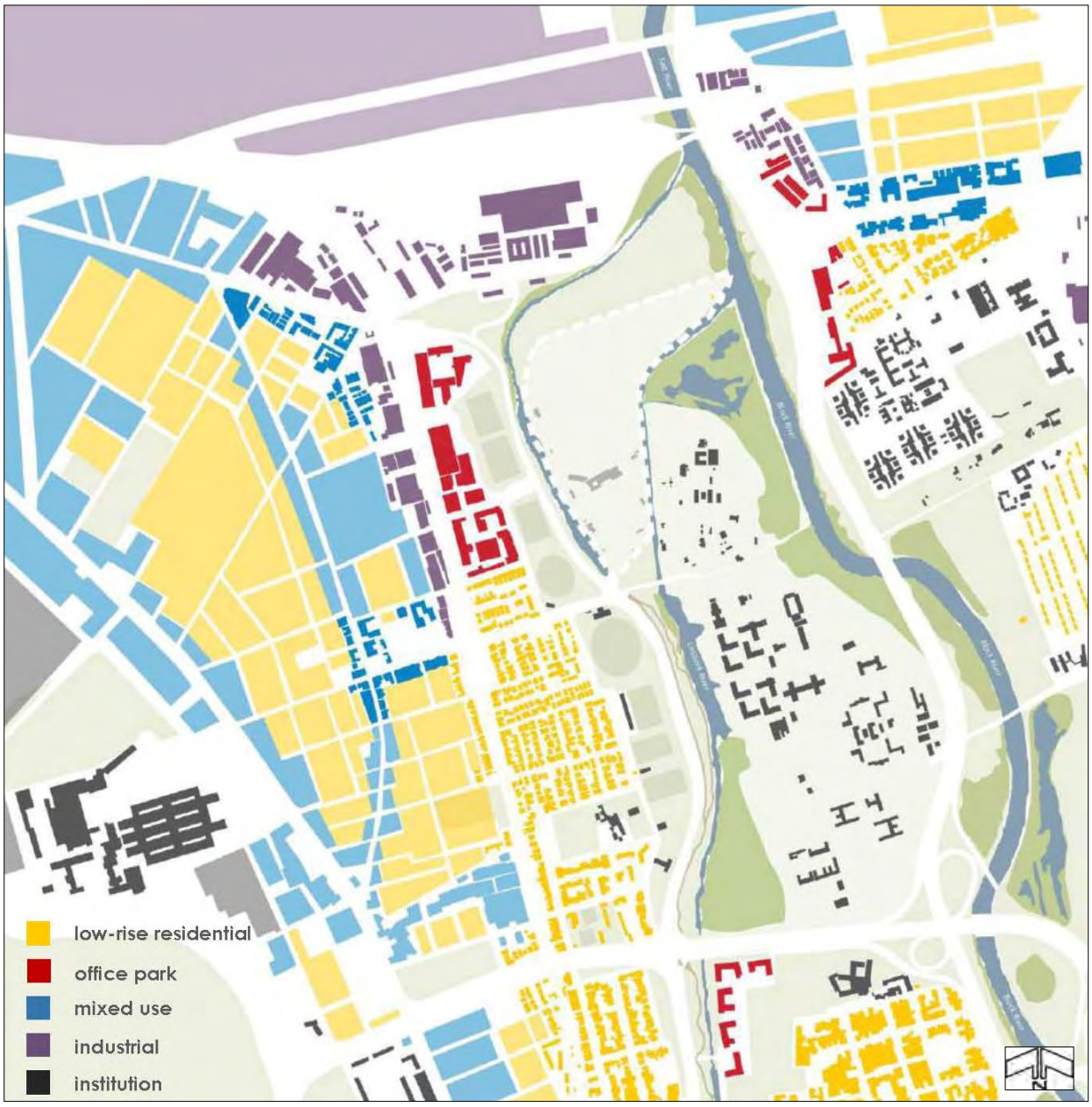

Figure 6: Surrounding land use design indicators (Source: Urban Concepts)

2.2.2 Heritage Significance

The convergence of the Black and Liesbeek rivers is a highly significant cultural and historical landmark. It represents an important seasonal crossing point for the pre-colonial Khoekhoe herders, an early site of conflict between these indigenous peoples and foreign settlers, and the site of early colonial fortifications and settlements. These historical significances result from the physical qualities of the rivers, the floodplain, the wetlands and the low ridge now occupied by SAAO.

The floodplain has largely been dredged and developed and the physical crossing point has been lost.

The symbolic and historical importance of the site is not in artefacts or buildings, but is represented by the natural environment. The HIA has identified the Liesbeek River – both the canalized and the earlier course, the confluence, and the banks – as the significant heritage resource on the site.

Design indicators relating to heritage are spatialized in **Figure 7** and are listed overleaf.

Figure 7: Heritage design indicators (Source: Urban Concepts)

- The canalized Liesbeek River should be rehabilitated to create an appropriate sense of “riverness” which will become legible as the floodplain of the river. This should facilitate ecological well-being (flora and fauna) as well as public amenity (walking and cycling).
- Development adjacent to the Observatory complex should be lower nearest the rehabilitated river course and step back to a higher level, ensuring the legibility of the complex and its tree canopy.
- The earlier river course west of the site no longer functions as a river but its shape or presence in the landscape should be retained.
- Development should have a substantial setback from the confluence in the north-east corner of the site. This space should be used to identify and celebrate this history, and there is the opportunity for a commemorative area, facility and/or event space in this location.

2.2.3 Built Form

Scale and fragmentation

The built form of the surrounding areas presents a variety of scale and grain.

Buildings to the north and west of the site, in particular impact on the experience of the site: the buildings associated with the PRASA railyard (to the north) are monolithic, spanning approximately 150-300m in length; the Black River Park (to the west) of the site has buildings of up to 100m long.

The Observatory (and Valkenberg further beyond) is located to the east of the site. These precincts are of a very different nature, with buildings set within a well treed landscape.

Design indicators relating to building scale are listed below and are spatialized in **Figure 8** overleaf.

- Buildings set within a landscape (e.g. public facilities, recreational buildings) to be associated with the open space system; this will assist with the use and activation of open spaces.
- More continuous buildings that define spaces and create active edges (e.g. perimeter block buildings) to be allocated in areas for noise and visual impact mitigation, as well as protection against the elements as required.
- Development should utilize a rectilinear grid in keeping with Observatory and adjacent suburbs.

Figure 8: Building scale design indicators (Source: Urban Concepts)

Building heights

Within the immediate context, the monolithic buildings of the PRASA railyards to the north, which are 20 - 25m in height, have a significant impact on the site. The buildings within the Black River Park to the west of the site vary in height between 4 - 9 storeys, and these buildings also impact on the site.

The M5 office park is located adjacent to the M5 to the east of the site, and, in conjunction with the M5 dominates the visual experience from the north-eastern corner of site. The buildings here are 3 - 4 storeys in height. The Observatory (and Valkenburg further beyond) to the south-east are are of a very different nature, with buildings set within a landscape. Buildings are 1 - 2 storeys high, and are built on higher ground.

In the broader context, the Salt River and Observatory areas to the west of the site have limited heights. Other precincts such as the Alexandra Psychiatric Hospital, Maitland Garden Village and the Oude Molen Village have relatively low heights. Ndabeni industrial area (further to the east) has larger, monolithic buildings with very few tall buildings.

Design indicators relating to building height are spatialized in **Figure 9** below and listed thereafter.

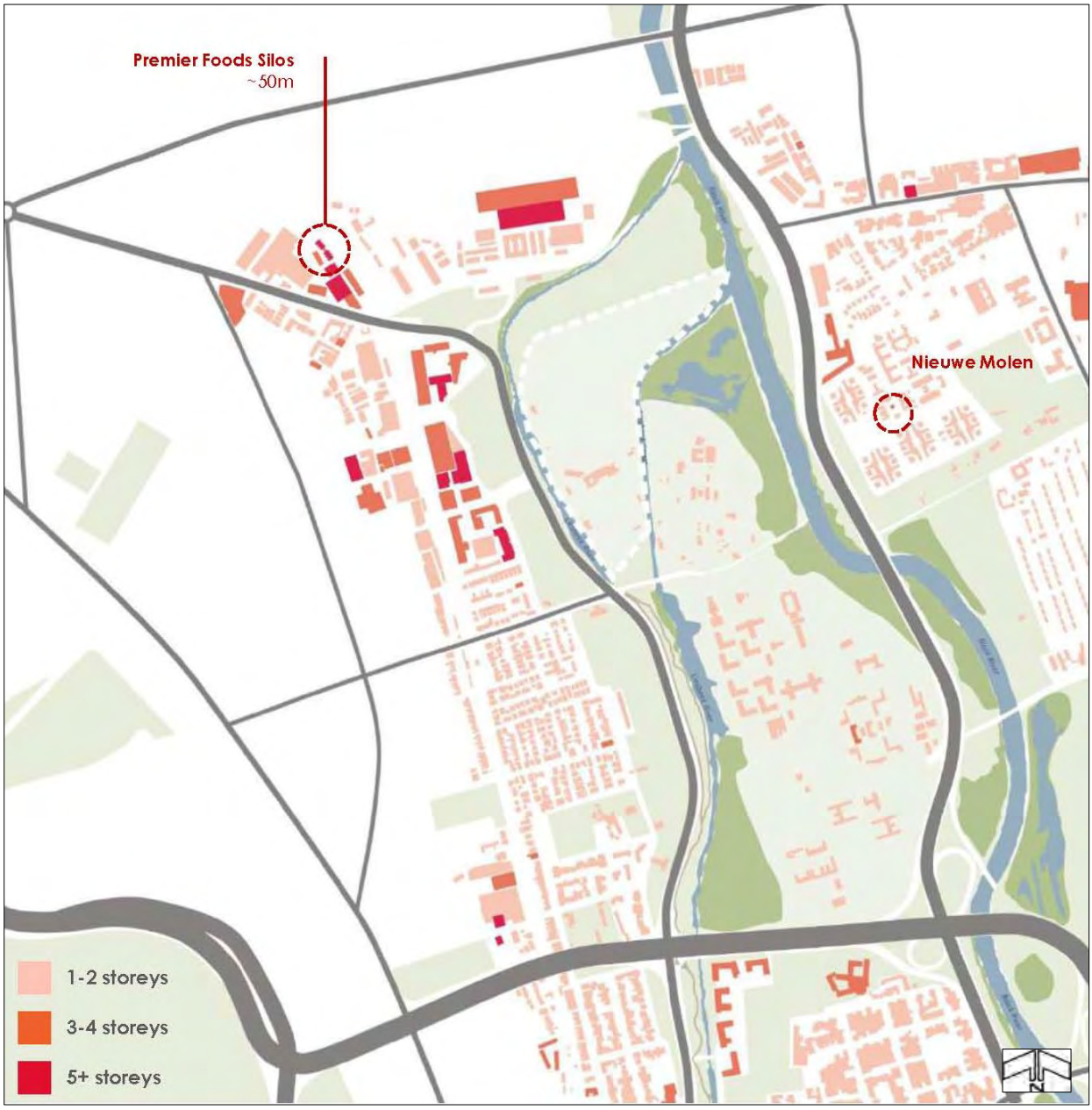

Figure 9: Building height design indicators (Source: Urban Concepts)

- Scale of buildings in close proximity to the Observatory should be respectful of the scale and character this heritage resource, so as not to detract from its significance.
- Buildings on the west along the old Liesbeek River channel should form a strong edge that helps to define the Liesbeek Parkway road.

- Buildings should act as a device to define public space, and shield against elements on this very exposed site (e.g. wind and noise from M5 and Liesbeek Parkway).

Figure 10 helps to further contextualise the site in relation to surrounding building heights.

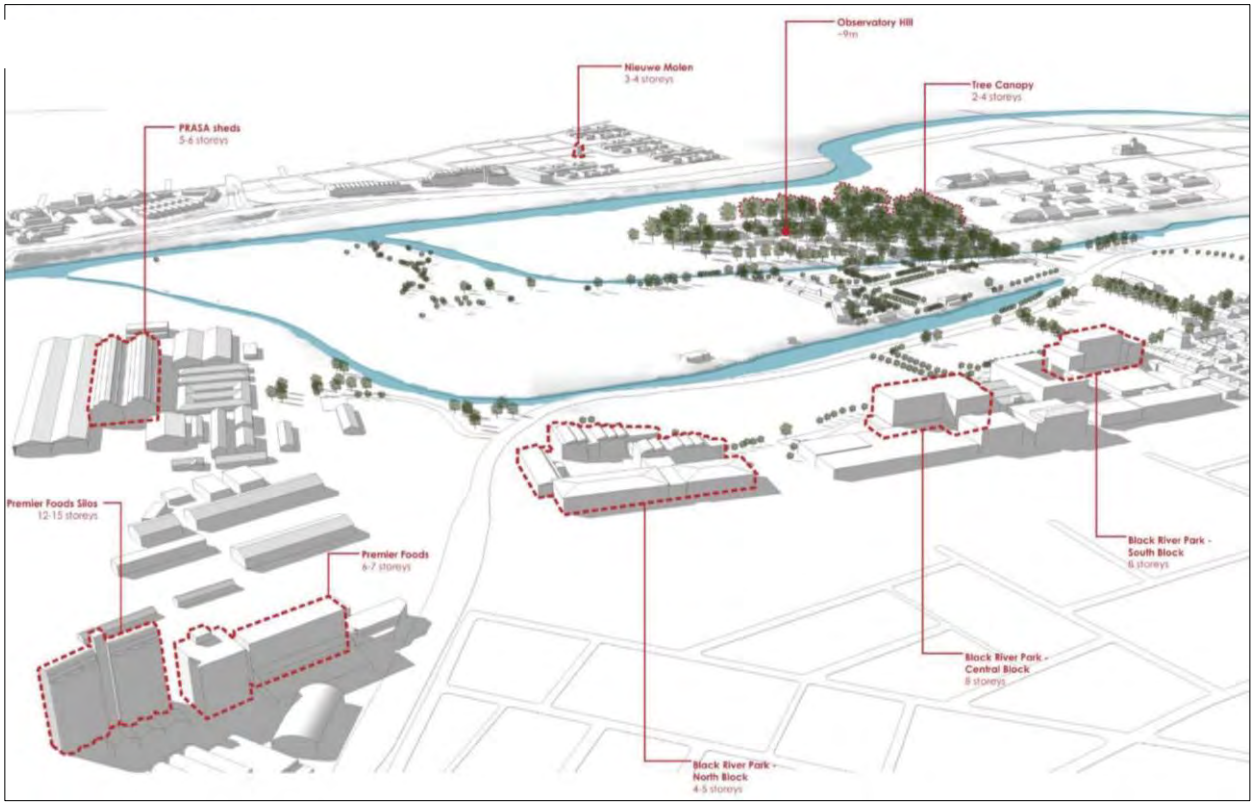

Figure 10: Surrounding building heights in context (Source: Urban Concepts)

Landmarks and gateways

With regards to landmarks, the site forms part of a historical landmark at the confluence of the two rivers. The site has a rich and significant pre-colonial history, but almost no tangible remnant thereof, with only the physical features of the landscape remaining intact (although the course of the rivers have been modified over time). The Observatory hill, with its large tree canopy, is a feature of this area. The Valkenberg Hospital complex is another historical landmark in the area and forms part of the cultural landscape, but it has little visual impact on the site. Other historic landmarks such as Nieuwe Molen in the east and Groote Schuur Hospital to the south-west are visible from the site, but are not significant as experienced on site. Glimpses of the harbour cranes connect the site to the sea, and the silos to the north- west of the site are clearly visible. In addition, the mountain peaks are among the most prominent landmarks experienced from the site.

In terms of gateways, the existing entrance from Station Road is regarded as a gateway to the site, though the tree-lined entrance avenue is not part of an historic landscape pattern (it is not evident on aerial photography dated before 1944). The future Berkley Road extension will potentially transform the northern part of the site into a gateway between Maitland (to the east) and Salt River and the CBD (to the west).

Design indicators relating to landmarks and gateways are spatialized in **Figure 11** below and listed thereafter.

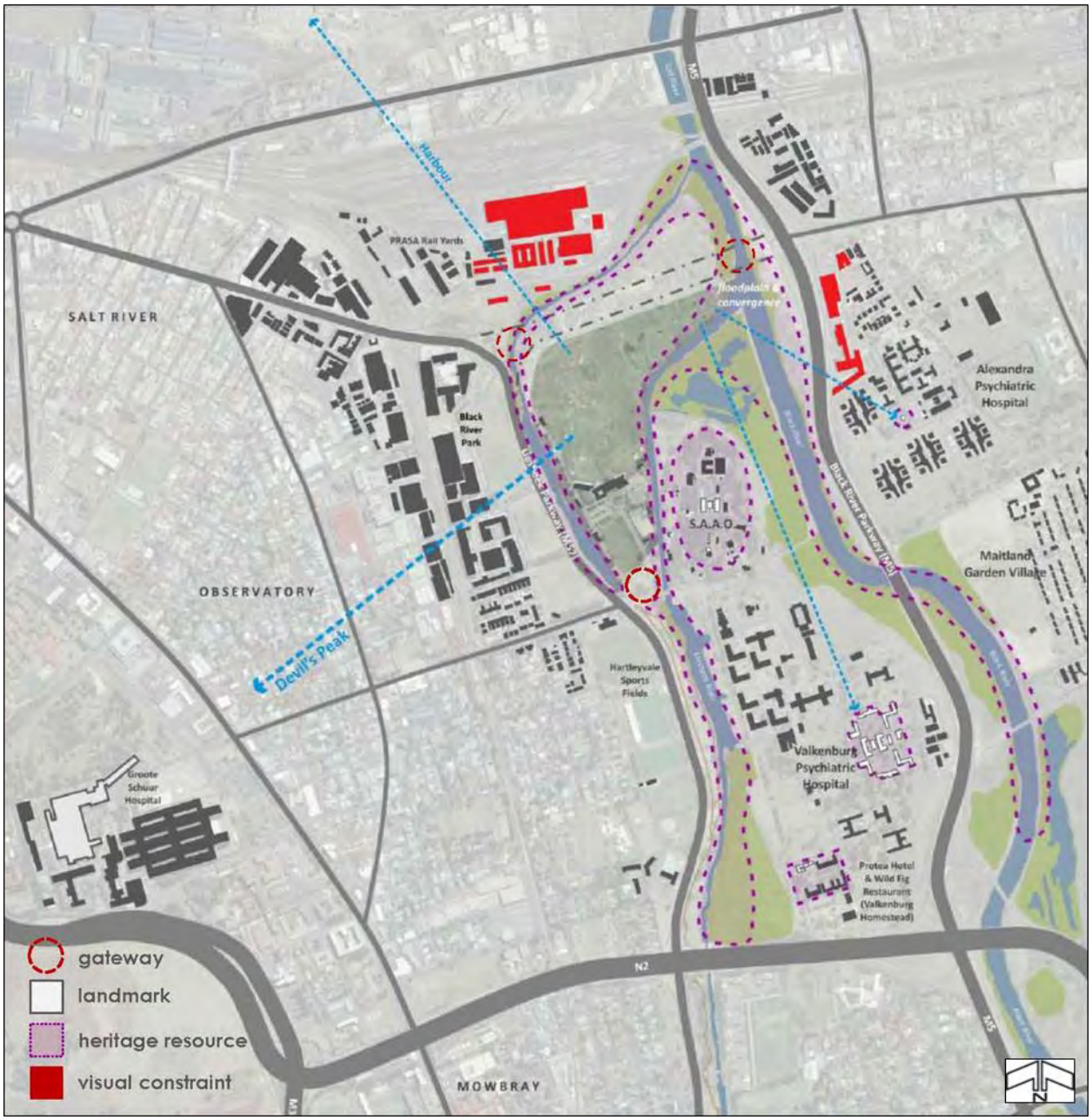

Figure 11: Landmarks and gateways design indicators (Source: Urban Concepts)

- The significance of the convergence of the rivers should be respected and enhanced. Built form should step back from the rivers at this point to allow this part of the landscape to be experienced and celebrated in its own right.
- New buildings proposed adjacent to the Observatory site to be respectful of this precinct. The scale and form of buildings in this location to be fragmented and varied to avoid large monolithic buildings.

- Ensure that the key landmarks in the immediate as well as broader context be acknowledged, and defined within the new public open space system for the site.
- Include the existing entrance to the site from the south as a key vehicular / pedestrian link into the new development

2.2.4 Connectivity

The site is strategically located adjacent to the Liesbeek Parkway (M57) and the M5, with easy access to the N2 and areas beyond. These roads do however have a significant impact on the quality of the open space system in this area.

The most notable impact on the design of this precinct from a connectivity point of view, is the proposed Berkley Road extension. The Station Road link to the site is also an important integrator route.

It is also important to note that the site is within comfortable walking distance of two train stations: Observatory to the south-west; and Koeberg to the north-east.

Design indicators relating to connectivity are listed below and are spatialized in **Figure 12** and listed overleaf.

Figure 12: Connectivity design indicators (Source: Urban Concepts)

- The proposed Berkley Road extension is one of the key informants for the design of this new precinct within Cape Town. Linkages to the area north of the extension should be encouraged to ensure that the convergence of the rivers and surrounding area is not 'cut off' from the site and green areas beyond by the new road.
- Ensure optimal connectivity but avoid a 'rat-run' through the site. The site should be considered as a destination rather than a thoroughfare.
- The challenges of the water table in relation to basement parking needs to be addressed. Any open surface parking areas (i.e. not in basements) should be contained in smaller areas.
- Conform to future design controls related to activity on streets and associated spaces.

2.2.5 Synthesis

A synthesis map illustrating the design informants for the site is shown in **Figure 13** overleaf.

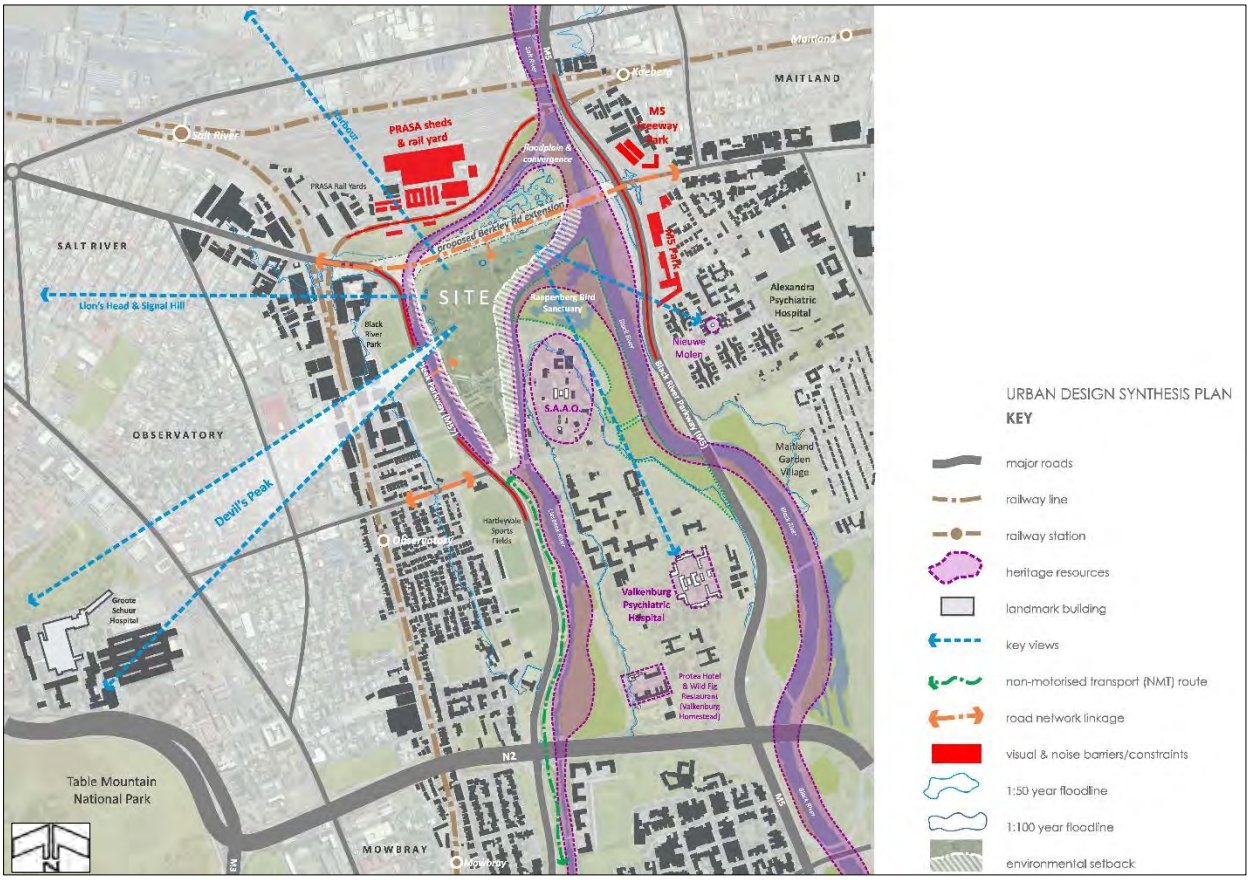

Figure 13: Synthesis of urban design indicators (Source: Urban Concepts)

2.3 Urban Design Recommendations

2.3.1 Spatial System

Integration of environmental aspects and view corridors

Design recommendations relating to environmental aspects (including view corridors) spatialized in **Figure 14** below and listed thereafter.

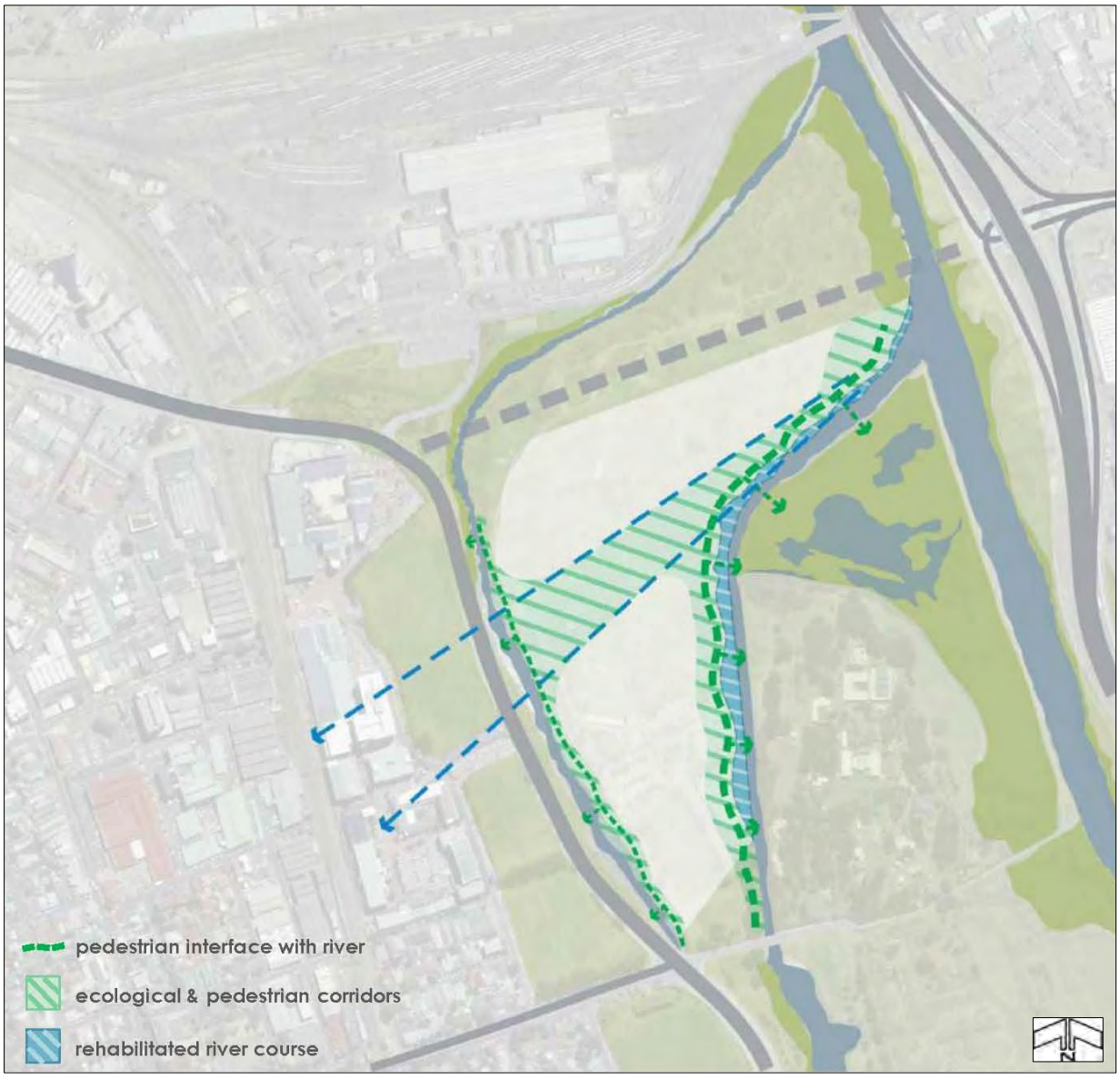

Figure 14: Environmental related design recommendations (Source: Urban Concepts)

- Rehabilitate the canalized river course, and include the experience of this, the Raapenberg Wetland & Bird Sanctuary and the SAAO complex as an integral part of a continuous public space system.

- Enhance the physical connection with the Liesbeek River – both the old channel and the rehabilitated canal – and the Raapenberg Wetland & Bird Sanctuary by creating and defining spaces for people.
- Maintain a substantial open green space in the heart of the site as a pedestrian and ecological link between the two river corridors, to maintain visual permeability and a sense of openness.
- Locate publicly accessible amenities throughout the site, along the edges of the central open space and the green riverine corridors.
- Ensure legible, integrated pedestrian movement system which is in line with the NMT networks and plans for the surrounding areas. It is recommended that this forms part of the river interface.

Public realm continuation

Design recommendations relating to the public realm are spatialized in **Figure 15** and listed overleaf.

Figure 15: Public related design recommendations (Source: Urban Concepts)

- A significant publicly accessible open space system is recommended in order to welcome people into the site, maintain the site's sense of openness and continuity, and to add value to the broader urban realm.
- Provide public space along the edge of the rehabilitated canal as well as the earlier river course, for walking, cycling and leisure, as a continuation of the existing public space network south of the site (see indicators). Use staggered building footprints to define spaces along the rehabilitated river course.
- Extend this space across the site, connecting the two river corridors, bringing people into the development. The central area has the potential to be used for public recreation, as it is less ecologically sensitive than the river edges.
- The recommended development parcels should be visually and physically permeable to pedestrians, to help integrate the different spaces within and around the site.
- Land uses to include a combination of commercial, residential, retail, as well as public facilities.

2.3.2 Built Form

Fragmentation of building form

Design recommendations relating to building form are listed below and are spatialized in **Figure 16** overleaf.

- A variety of building forms should be introduced to ensure varied grain and fragmentation.
- The larger building forms be located to the north of the site. The street grid proposed for this area of the site relates to the rectilinear grid of surrounding urban fabric. It is however important to create another level of fragmentation with a variety of roofs, at varying heights.
- A finer grain in building form and above ground building envelope is recommended to the south, in proximity to the SAAO.
- Buildings adjacent to the rehabilitated canal (opposite the SAAO) to be free-standing in areas with small footprints. No continuous perimeter block buildings are recommended along this edge.
- Buildings along the public open space on rivers and central open space to have a level of continuity in façade treatment to ensure a well-defined edge condition, enabling active edges in areas.

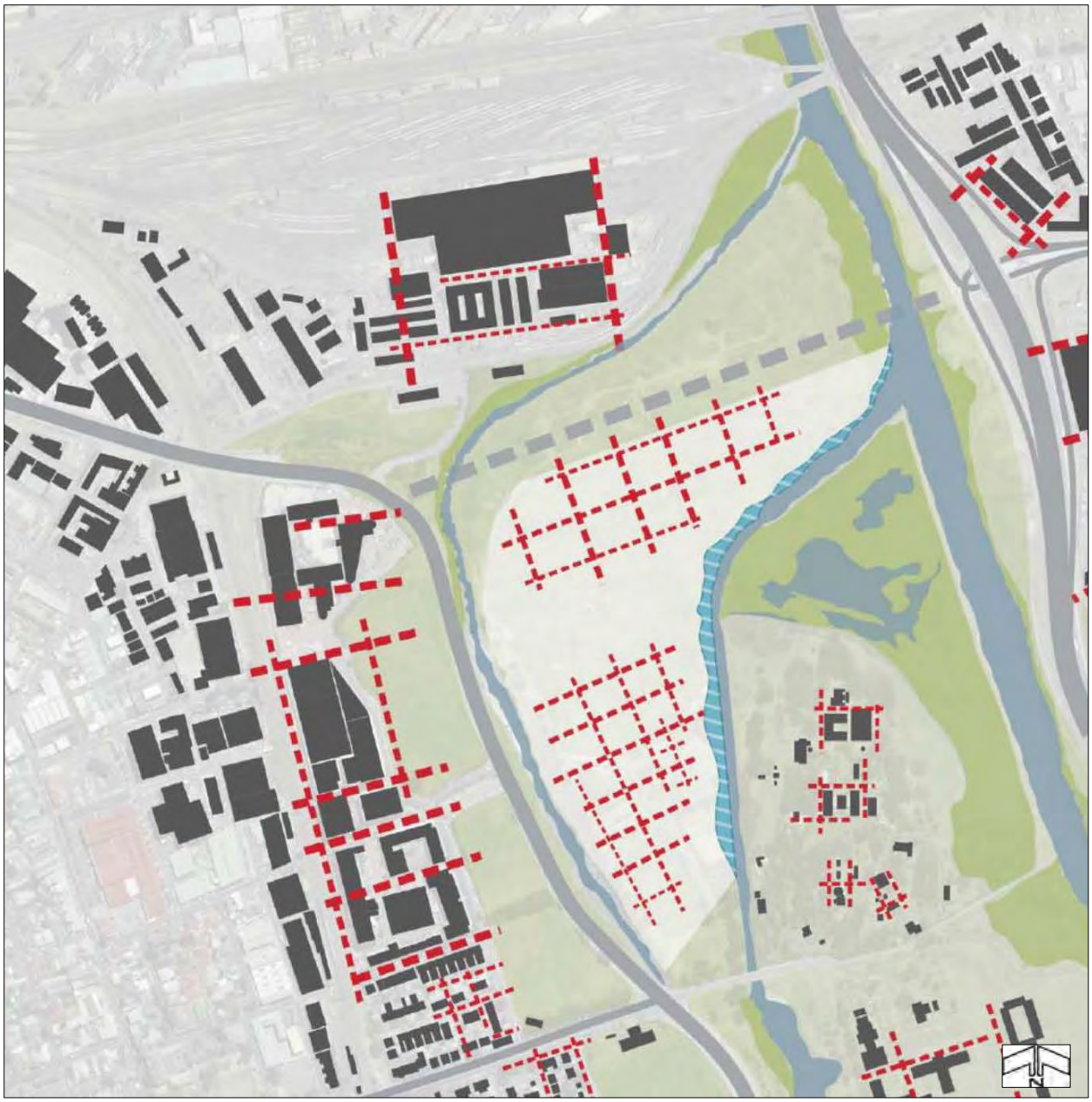

Figure 16: Built form related design recommendations (Source: Urban Concepts)

Building heights

Design recommendations relating to building heights are listed overleaf and are spatialized in **Figure 17** overleaf.

- The taller building forms be located to the north of the site. This will assist in defining the Berkley Road edge, and will play a role in defining public areas on this very exposed, noisy site.
- Lower buildings are recommended to the south (in proximity to the SAAO). The tree canopy of the SAAO site is prominent, and should be considered as a reference overshadowed (the SAAO itself is not clearly visible from the site).

- The opportunity to include focus buildings (taller than adjacent built form) is noted. Two key positions are identified: the first is to signal the entrance point from Berkley Road; the second is proposed in close proximity to the other entrance to the site from Liesbeek Parkway, and suggests a focus building on the new public park. It is recommended that this building has a mix of uses.

Figure 17: Building height related design recommendations (Source: Urban Concepts)

2.3.3 Connectivity

Site integration and accessibility

Design recommendations relating to site integration and accessibility are listed below and are spatialized in **Figure 18** overleaf.

- The ability to traverse the site, and integrate the site with surroundings, without creating a ‘rat-run’ for vehicles.
- Continuity of public access and pedestrian movement throughout the site.
- The vehicular system to include public transport node(s) to alleviate private transport pressures.
- The proposed Berkley Road extension has been identified as a Class 3 road in the transport & planning frameworks and this will become the primary access point onto the site. From a planning and urban design perspective it is recommended that multiple entrances be considered into the site.

Figure 18: Site integration and accessibility related design recommendations (Source: Urban Concepts)

2.4 Conclusion

The indicators and recommendations provided in the urban design report establish guidelines for the responsible development of the site. The spatial recommendations seek to provide a coherent urban form which relates to its surroundings while retaining the site's unique sense of place, and enhancing the views from, into, and through the site. Emphasis is placed on well-defined public space allowing pedestrians access to the rivers and through the site, with commercial and other activity considered as a way to increase safety and vibrancy.

The most important recommendation from urban design, heritage and environmental perspectives, is the revitalization of the Liesbeek River by removing the concrete canal, reintroducing planted banks and widening its course to create a more natural river-like environment. This is an opportunity to improve its ecology and the surrounding ecosystems, as well as creating a special place for pedestrians to experience the river.

The interpretation of heritage indicators is intended to respect and enhance the major historical and cultural significance of this resource, most notably the Liesbeek River. The experience of this landscape should be made more accessible to the public, and its historical importance made legible. As such, the manner in which buildings are designed and respond to the rehabilitated riverine corridor will be important.

3. DEVELOPMENT ALTERNATIVES

3.1 The "No-Go" Alternative

3.1.1 General Overview

This is the base situation for evaluation purposes. It assumes the existing activities and uses will continue in terms of existing rights, as well as any new development that can occur within these existing rights without new statutory approvals. The existing uses on the site are shown in **Figure 19** overleaf.

3.1.2 Land Use Summary

A land use summary for this alternative is shown in **Table 1** below.

Table 1: Land use summary for the "No-Go" Alternative

Land use	Approx. Land Area (m²)	Site %
Golf driving range (including golf retail shop)	83 000	56%
Mashie golf course	34 000	23%
Parking	16 000	10.7%
Ancillary open space (including roads)	12 000	8%
Conference facility / events & banqueting / restaurant	2 800	2%
Cycling retail shop	350	0.2%
Chiropractor	250	0.1%

3.1.3 Implications

The major implications of this alternative are:

- The existing buildings on Erf 151832 and existing uses, including the golf driving range, will remain in place.
- Rehabilitation of the riverine edges and the wetland will not occur.
- Private sector funding for the Berkley Road extension will not materialise and implementation of this road will be delayed.
- A potential catalytic project in the city will be foregone.
- Significant income for the Municipality in terms of rates to assist with service delivery in areas of need elsewhere in the city will be lost.
- Significant employment and economic opportunities will be lost.
- The location and size of the property, as well as the fact that the property is in private ownership, means that this is a highly unlikely scenario over the longer term.

THE SITE

THE RIVER CLUB OBSERVATORY

NO-GO ALTERNATIVE

SCALE 1 :3000

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Figure 19

3.1.4 Required Statutory Applications

The existing rights would remain in place and therefore no statutory land use applications would be required for this alternative**.**

3.2 Alternative 1: Riverine Corridor Alternative

3.2.1 General Overview

This alternative proposes approximately 150 000 m² of floor space to be developed, which includes retail, office, residential (including inclusionary housing[1]), hotel and community uses. Developed areas of the site (including roadways) will be raised above the 100-year flood elevation.

The proposal provides for a wide riverine corridor along the route of the existing canal running adjacent to the eastern boundary of the site, while the old Liesbeek River channel on the western edge of the site will be largely infilled and landscaped with a vegetated stormwater swale. An 'ecological corridor' and open space will extend across the site in an east-west direction, connecting the rehabilitated riverine corridor and the stormwater swale. Alongside the transformed riverine corridor there will be pedestrian and cycle paths, as well as veiwing and seating areas where the public where the public can enjoy the amenity of this rehabilitated water course. The SAAO, with its heritage features, and the Raapenberg Wetlands & Bird Sanctuary, with its associated flora and fauna, will become more accessible to the public as a result of the riverine corridor upgrade.

This alternative is illustrated in **Figure 20** overleaf. This is the preferred development alternative.

3.2.2 Proposed Uses

The River Club is intended to be a mixed use development that encourages people to "live, work and play" in a safe and attractive environment. Of the planned 150 000 m² of floor space, the land use split for the total project is expected to be as shown in **Table 2**.

Two precincts are proposed, with Precinct 1 in the southern portion of the site and Precinct 2 in the north adjacent to Berkley Road extension. It is anticipated that most of the offices will be located in Precinct 2 where higher buildings are more appropriate, and most of the residential component will be located in Precinct 1 where a finer grain of development is more appropriate. The split of floor space between the two precincts is shown in **Table 3**, while a summary of lnd area allocation in terms of development area is shown in **Table 4**.

[1] The proponent is committed to ensuring that 20% of the total floor space (estimated at approx. 150 000m²) to be built at the River Club will be devoted to residential use. Of the 20% devoted to residential use, 20% will be allocated to inclusionary housing – these units will be integrated into the same blocks of apartments as the other residential units. In order to achieve this, the proponent is prepared to subsidise the rental in respect of the inclusionary housing units.

THE RIVER CLUB OBSERVATORY	
ALTERNATIVE 1	
NTS	vivid architects
JUNE 2019	**Figure 20**

Table 2: Use and floor space summary for Alternative 1

Land Use	Approximate Floor Space (m²)
Retail (including restaurants etc.)	30 000
Office	60 000
Residential (including subsidised component)	30 000
Hotel	8 000
Ancillary (including gym, conference facilities etc.)	22 000
Total	**150 000**

Table 3: Precinct split for Alternative 1

Precinct 1	
Uses	**Approximate Floor Space**
Retail, offices, residential, hotel and ancillary uses	65 000 m²
Precinct 2	
Uses	**Approximate Floor Space**
Retail, offices, residential, hotel and ancillary uses	85 000 m²

Table 4: Land use summary for Alternative 1

Land Use	Approx. Land Area (m²)	Site %
Mixed use development (including super-basement areas)	79 500	54%
Soft open space (including river buffers, eco corridor and parkland)	61 500	41%
Hard open space (including roads and sidewalks)	7 500	5%

3.2.3 Key Development Characteristics

The key characteristics of this alternative are:

- Construction of a substantial section of Berkley Road extension by the developer, which will establish a public amenity in terms of the wider transportation network;
- Additional access via a new bridge crossing the old Liesbeek River channel from Liesbeek Parkway;

- An orthogonal urban form and road network which fits with the context of the surrounding area;
- Medium rise retail, hotel and residential apartment buildings (approximately 4 - 9 storeys[2]) located in the southern portion of the development (Precinct 1), with the lowest buildings being located along the edge abutting the SAAO;
- Medium-high rise office / residential buildings (approximately 6 - 10 storeys) located along the Berkley Road extension in the northern portion of the site (Precinct 2);
- Approximately 150 000m² of floor space;
- Provision of approximately 140 inclusionary housing units[3];
- Most parking accommodated in super-basement structures underneath the developed portions of the site;
- Remodelling of the existing canal into a rehabilitated riverine corridor, including a riverine buffer of approximately 25 - 40m between the river and the developed area on the site;
- Infilling of the old Liesbeek River channel and remodelling of this channel into a vegetated stormwater swale, including a buffer area of approximately 10 - 20m between the stormwater swale and developed area on the site;
- Central park that functions as a public space as well as an east-west ecological corridor through the development;
- Non-motorised transport to include pedestrian paths and running and cycling tracks throughout the development; and
- Facilities for future MyCiTi bus and taxi services.

3.2.4 Financial Feasibility

An overview of the feasibility analysis for this alternative is shown in **Table 6** below.

Table 6: Alternative 1 feasibility analysis overview[4]

Gross first year income	**R 464,720,000**
First year operating costs	**R (62,737,000)**
Net first year income	**R 401,983,000**
Net first year return (before tax)	**9.01%**

A summary of the feasibility analysis conducted for Alternative 1 is attached as **Annexure B**.

3.2.5 Implications

The major implications of this alternative are:

[2] It must be noted that storeys range in height according to use: retail (6m floor to floor); offices (4.5m floor to floor); residential (3.5m floor to floor); and hotel (3.5m floor to floor).
[3] Approximately 30 000m² of residential GLA is proposed, of which 20% will be inclusionary housing. The inclusionary housing units will be an average size of 35m².
[4] It is important to note that the feasibility calculation is based on Gross Leasable Area (GLA) and not floor space (GLA has been assumed to be approximately 85% of floor space).

- With a projected annual return of 9.01% (pre-tax), the project is considered to be financially viable.
- Approximately 80 000m² (± 55%) of the site will be raised above the 100-year flood elevation to approximately 7m above mean sea level in order to accommodate development.
- A catalytic, mixed use development will be implemented at the western gateway into TRUP.
- Densification and diversification of residential stock will occur in-line with the City of Cape Town's Densification Policy.
- Inclusionary housing will be provided, thus satisfying an important social need.
- Supply of retail and office space in this location will satisfy proven market demand.
- The development will assist to cross subsidize the Berkley Road extension, which has been identified by the City of Cape Town's Transport and Urban Development Authority's (TDA) as a key road network intervention.
- Intense urban development will occur within a 500m radius from higher order public transport stations (i.e. Observatory and Koeberg train stations), in line with the City of Cape Town's Transit Oriented Development Strategy.
- The existing canal will be rehabilitated into a riverine corridor that will effectively allow for a continuation of the lower Liesbeek River as a visually congruent and publicly accessible riverine corridor, with resulting ecological and social benefits.
- The original course of the Liesbeek River to the west of the site will be converted into a landscaped stormwater swale.
- An ecological corridor / parkland area will extend through the site in an east-west direction, thus allowing for faunal movement and recreational activities.
- The development will yield a substantial income for the Municipality in terms of rates to assist with service delivery in areas of need elsewhere in the city.

3.2.6 Required Statutory Applications

a. City of Cape Town Municipal Planning Amendment By-Law

A composite planning application is being prepared in terms of the City of Cape Town Municipal Planning Amendment By-Law (MPBL), including the Cape Town Development Management Scheme (DMS), for the approval of the following:

- Deviation from the Table Bay District Plan, to permit urban development on land designated as "open space", "core 2" and "buffer 1", in accordance with section 16(2)(b) of the MPBL and in terms of section 42(i) of the MBPL.

- Rezoning of the property from *Open Space Zoning 3: Special Open Space (OS3)* to *Subdivisional Area Overlay Zoning (SAO)* (in terms of section 42(a) of the MPBL).

- Approval to construct retaining structures (in terms of section 42(i) of the MPBL and item 126 of the DMS).

In addition to the above, deviations are required from the following policies:

i. City of Cape Town Floodplain and River Corridor Management Policy (2009)

    - Section 9.2: Flood management and public safety

Permission to develop / obstruct the free flow of water within the 20-year flood plain.

- Section 10.5: Table 1: Framework for the assessment of proposals

  Permission to infill within the 50-year flood plain.

ii. City of Cape Town Management of Urban Stormwater Impacts Policy (2009)

- Annexure table: 24 hour extended detention of the1-year RI, 24h storm event in a greenfield development > 50 000 m².

  Permission to deviate from this requirement.

- Annexure table: Up to 10-year RI peak flow reduced to pre-development level in a greenfield development > 50 000 m².

  Permission to deviate from this requirement.

b. National Environmental Management Act

Sections 24 and 44 of the NEMA make provision for the promulgation of regulations that identify activities which may not commence without an Environmental Authorisation (EA) issued by the Department of Environment Affairs & Development Planning (DEA&DP). In this context, the EIA Regulations, 2014, list activities that require EA ("NEMA listed activities").
The proposed project includes activities that are listed in terms of the EIA Regulations, 2014. As such, it will be necessary to undertake a Basic Assessment (BA) process in support of the application.

c. National Heritage Resources Act

The development will trigger the need for a Heritage Impact Assessment (HIA) in terms of Section 38(1) of the National Heritage Resources Act (NHRA).

The HIA will be undertaken as part of the BA process in terms of NEMA.

d. National Water Act

A Water Use Licence in terms of Section 21 of the National Water Act (NWA) will be required from the Department of Water and Sanitation.

3.3 Alternative 2: Island Concept Alternative

3.3.1 General Overview

This alternative is largely the same as Alternative 1, with the only three differences being: firstly that it involves the upgrading and setback along the old Liesbeek River channel and the retention of the canal as a manmade engineered structure (i.e. the existing watercourses adjacent to the site will remain largely unchanged); secondly that the link road between Berkley Road and Liesbeek Parkway is on a diagonal and not orthogonal; and thirdly, the heights in Precinct 1 are slightly higher. This alterative is illustrated in **Figure 21** overleaf.

1 This denotes the number of storeys above the base level.

16m This denotes the estimated building height from the proposed first level of habitable space at 6.4m above MSL to the top of the uppermost level of habitable space. Note the height listed excludes roof profiles and roof level service rooms.

PRECINCT 1:
The base level (i.e. average ground level) of the building proposed in Precinct 1 is 3.10m above msl.

PRECINCT 2:
The base level (i.e.average ground level) of the building proposed in Precinct 2 is 4.19m above msl.

Approximate storey heights for building uses are:

RETAIL:	6.0m
CONFERENCING:	4.5m
GYM:	5.0m
HOTEL FLOOR:	3.5m
OFFICE:	4.5m
RESIDENTIAL:	3.5m
OFFICE GROUND FLOOR:	5.0m
ROOF PROFILE AND SERVICE AREAS:	2.5m

THE RIVER CLUB OBSERVATORY

ALTERNATIVE 2

NTS

vivid architects

JUNE 2019

Figure 21

3.3.2 Proposed Uses

The proposed uses, as well as their associated floor space, are the same as Alternative 1, as shown in **Table 7** and **Table 8** below. The land use summary, as shown in **Table 9**, is slightly different to Alternative 1 because the developable area in Precinct 1 is marginally bigger (owing to slightly smaller setbacks from the rivers).

Table 7: Use and floor space summary for Alternative 2

Land Use	**Approximate Floor Space (m²)**
Retail (including restaurants etc.)	30 000
Office	60 000
Residential (including affordable / inclusionary housing)	30 000
Hotel	8 000
Ancillary (including gym, conference facilities etc.)	22 000
Total	**150 000**

Table 8: Precinct split for Alternative 2

Precinct 1	
Uses	**Approximate Floor Space**
Retail, offices, residential, hotel and ancillary uses	65 000 m²
Precinct 2	
Uses	**Approximate Floor Space**
Retail, offices, residential, hotel and ancillary uses	85 000 m²

Table 9: Land use summary for Alternative 2

Land Use	**Approx. Area (m²)**	**Site %**
Mixed use development (including super-basement areas)	82 000	55%
Soft open space (including river buffers, eco corridor and parkland)	59 000	45%
Hard open space (including roads and forecourts)	7 500	5%

3.3.3 Key Development Characteristics

The key characteristics of this alternative are:

- Construction of a substantial section of the Berkley Road extension to the north of the site by the developer, which will not only provide access onto the site, but will also establish a public amenity in terms of the wider transportation network;
- Additional access via a new bridge crossing the old Liesbeek River channel from Liesbeek Parkway, which connects with a Berkley Road extension via a principle link road running at a diagonal through the site;
- Medium rise retail, hotel and residential apartment buildings (generally 5 - 9 storeys) located in the southern portion of the development (Precinct 1);
- Medium rise office / residential buildings (approximately 6 - 10 storeys) located along the Berkley Road extension in the northern portion of the site (Precinct 2);
- Approximately 150 000m² of floor space;
- Provision of approximately 140 inclusionary housing units;
- Most parking accommodated in basement and semi-basement parking structures;
- Retention of the existing canal (with approximate 10m ecological buffer);
- Retention of the old Liesbeek River channel (with approximate 25m buffer);
- Central park that functions as a public space as well as an east-west ecological corridor through the development;
- Non-motorised transport to include pedestrian paths and running and cycling tracks throughout the development.

3.3.4 Financial Feasibility

An overview of the feasibility analysis for this alternative is shown in **Table 10**.

Table 10: Alternative 2 feasibility analysis overview[5]

Gross first year income	**R 464,720,000**
First year operating costs	**R (62,737,000)**
Net first year income	**R 401,983,000**
Net first year return (before tax)	**8.92%**

A summary of the feasibility analysis conducted for Alternative 2 is attached as **Annexure C**.[6]

3.3.5 Implications

The major implications of this alternative are:

[5] Refer to footnote 4 on pg. 29.
[6] Note that although the numbers in Table 4 and Table 7 are the same, the return for Alternative 1 is slightly higher than that for Alternative 2 due to the cost of the bridge over the old Liesbeek Channel being reduced Alternative 1 due to the proposed infilling of this channel in that development scenario.

- The potential benefits of rehabilitating the canal into a riverine corridor will be forgone. Currently, the Liesbeek River and its associated riverine corridor is disrupted by this man-made canal, and as a consequence the legibility and functionality of the river is compromised. This has negative implications for environmental sustainability, heritage significance and public amenity.
- The original course of the Liesbeek River will not be rehabilitated.
- The original Liesbeek River channel will remain without true identity in the wider context, and will consolidate the island appearance of the River Club in the landscape.
- With a projected annual return of 8.92% (pre-tax), this alternative is considered to be financially viable.
- Approximately 80 000m² (± 55%) of the site will be raised above the 100-year flood elevation to approximately 7m above mean sea level in order to accommodate development.
- A catalytic, mixed use development will be implemented at the western gateway into TRUP.
- Densification and diversification of residential stock will occur in-line with the City of Cape Town's Densification Policy.
- Inclusionary housing will be provided, thus satisfying an important social need.
- Supply of retail and office space in this location will satisfy proven market demand.
- The development will assist to cross subsidize the Berkley Road extension, which has been identified by the City of Cape Town's Transport and Urban Development Authority's (TDA) as a key road network intervention.
- Intense urban development will occur within a 500m radius from higher order public transport stations (i.e. Observatory and Koeberg train stations), in line with the City of Cape Town's Transit Oriented Development Strategy.
- An ecological corridor / parkland will extend through the site in an east-west direction, thus allowing for faunal movement and recreational activities.
- The diagonal alignment of the link road is efficient but is inconsistent with the character of the surrounding area.
- The development will yield a substantial income for the Municipality in terms of rates to assist with service delivery in areas of need elsewhere in the city.

3.3.6 Required Statutory Applications

The same applications as described in sub-section 3.2.6 above would be required.

3.4 Alternative 3: Mixed Use Affordable Alternative

3.4.1 General Overview

This alternative assumes that a large part of Precinct 1 is directed at the affordable and inclusionary housing market, with Precinct 2 accommodating a mix of office, retail and residential use. Only a limited retail component is included in this alternative. This alternative is shown in **Figure 22** overleaf.

3.4.2 Proposed Uses

A summary of uses for this alternative is shown in **Tables 11 – 13** overleaf.

M5
M5
BLACK RIVER
BLACK RIVER
BLACK RIVER
RAAPENBERG BIRD SANCTUARY
SAAO
VALKENBERG HOSPITAL
LIESBEEK AVENUE
LIESBEEK RIVER
OBSERVATORY RD
BERKLY ROAD EXTENTION
BERKLY ROAD EXTENTION
REHABILITATED WESBEEK RIVER COURSE
SKA
PRECINCT 2
PRECINCT 1
ECO CORRIDOR
BERKLY ROAD EXTENTION
Old Un-Rehabilated River Course
STATION RD
LIESBEEK PARKWAY
LIESBEEK PARKWAY
LINK ROAD
OBS
PRASA
BLACK RIVER PARK

THE RIVER CLUB OBSERVATORY	
ALTERNATIVE 3	
NTS	vivid architects
JULY 2018	Figure 22

Table 11: Use and floor space summary for Alternative 3

Land Use	Approximate Floor Space (m²)
Retail (including restaurants etc.)	7 500
Office	55 000
Market Residential	23 500
Affordable / Inclusionary Residential	21 000
Ancillary (including gym, conference facilities etc.)	3 500
Total	**110 000**

Table 12: Precinct split for Alternative 3

Precinct 1	
Uses	**Approximate Floor Space**
Retail, affordable / inclusionary residential and ancillary uses	25 000 m²
Precinct 2	
Uses	**Approximate Floor Space**
Retail, offices, market residential and ancillary uses	85 000 m²

Table 13: Land use summary for Alternative 3

Land Use	Approx. Area (m²)	Site %
Mixed use development (including super-basement areas)	51 600	35%
Soft open space (including river buffers, eco corridor and parkland)	79 400	53%
Hard open space (including roads, sidewalks and surface parking)	17 500	12%

3.4.3 Financial Feasibility

An overview of the feasibility analysis for this alternative is shown in **Table 14** overleaf.

Table 14: Alternative 3 feasibility analysis overview[7]

Gross first year income	**R 319,329,000**
First year operating costs	**R (43,109,000)**
Net first year income	**R 276,220,000**
Net first year return (before tax)	**7.01%**

A summary of the feasibility analysis conducted for Alternative 3 is attached as **Annexure D**.

3.4.4 Implications

With a projected annual return of 7.01% (pre-tax), this alternative is not considered financially viable for the proponent and therefore will not be assessed as a feasible development alternative.

2.5 Alternative 4: Reduced Floor Space Alternative

2.5.1 General Overview

This alternative, illustrated in **Figure 23** overleaf, proposes less intense development on the site, with floor space reduced to approximately 102 000 m² and the provision of larger areas of green open space.

2.5.2 Proposed Uses

A summary of uses for this alternative is shown in **Tables 15 – 17**.

Table 14: Use and floor space for Alternative 4

Land Use	**Approximate Floor Space (m²)**
Retail (including restaurants etc.)	26 000
Office	53 500
Residential (including affordable / inclusionary housing)	15 000
Ancillary (including gym, conference facilities etc.)	7 500
Total	**102 000**

[7] Refer to footnote 4 on pg. 29.

M5
M5
BLACK RIVER
BLACK RIVER
RAAPENBERG BIRD SANCTUARY
SAAO
VALKENBERG
HOSPITAL
LIESBEEK AVENUE
LIESBEEK RIVER
OBSERVATORY RD
BERKLY ROAD EXTENTION
BERKLY ROAD EXTENTION
REHABILITATED LIESBEEK RIVER COURSE
SKA
PRECINCT 2
ECO CORRIDOR
BERKLY ROAD EXTENTION
Old Un-Rehabilated River Course
PRECINCT 1
STATION RD
PRASA
LIESBEEK PARKWAY
LINK ROAD
OBS
BLACK RIVER PARK

THE RIVER CLUB OBSERVATORY	
ALTERNATIVE 4	
NTS	vivid architects
JULY 2018	**Figure 23**

Table 16: Precinct split for Alternative 4

Precinct 1	
Uses	**Approximate Floor Space**
Retail, office and residential and ancillary uses	46 000 m²
Precinct 2	
Uses	**Approximate Floor Space**
Retail, offices, residential and ancillary uses	56 000 m²

Table 17: Land use summary for Alternative 4

Land Use	Approx. Area (m²)	Site %
Mixed use development (including sup-basement areas)	64 100	43%
Soft open space (including river buffers, eco corridor and parkland)	71 400	48%
Hard open space (including roads and sidewalks)	13 000	9%

2.5.3 Financial Feasibility

An overview of the feasibility analysis for this alternative is shown in **Table 18**.

Table 18: Alternative 4 feasibility analysis overview[8]

Gross first year income	**R 307,402,000**
First year operating costs	**R (41,499,000)**
Net first year income	**R 265,903,000**
Net first year return (before tax)	**7.44%**

A summary of the feasibility analysis conducted for Alternative 4 is attached as **Annexure E**.

2.5.4 Implications

With a projected annual return of 7.44% (pre-tax), this alternative is not considered financially viable for the proponent and therefore will not be assessed as a feasible development alternative.

[8] Refer to footnote 4 on pg. 29

3. CONCLUSION

NEMA requires that alternatives must be “reasonable” and “feasible”. Given that alternatives 3 and 4 are not financially viable to the proponent, these alternatives will be screened out when the alternatives are assessed in the Basic Assessment Report.

Alternatives 1 and 2 are considered the most feasible alternatives and these will be assessed during the Basic Assessment process in terms of NEMA. Alternative 1 is ultimately the preferred alternative because it is believed that it provides an appropriate and sustainable balance between environmental needs, heritage needs and optimal urban development.

ANNEXURE A

Urban Design Indicators and Recommendations

THE RIVER CLUB

URBAN DESIGN FRAMEWORK

Indicators & Recommendations

DECEMBER 2017

urbanconcepts

URBAN DESIGN ARCHITECTURE HERITAGE

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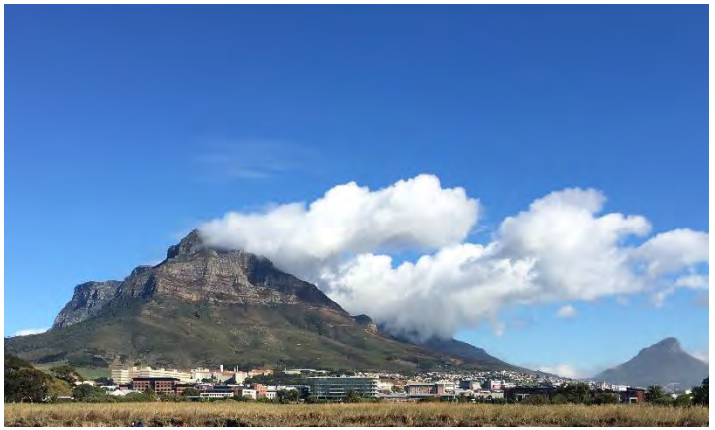

Please note: this document is intended to be read as a double-side printed document, i.e. with facing pages.

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URBAN DESIGN ARCHITECTURE HERITAGE

01

INTRODUCTION

1.1 PROCESS TO DATE

The process to develop the Urban Design Framework (Design Indicators and Recommendations) included the following:

- The analysis of the context and surrounds to develop a clear understanding of the site (attributes and challenges).
- Studies of the relevant urban design, planning, environmental and associated frameworks and background information.
- Workshops with the design team (architects, engineers etc) and client
- Initial meetings with the Urban Design and Planning department (City of Cape Town), as well as the consultant team for the TRUP project (CoCT & Provincial Authority)
- Discussions with Bridget O'Donoghue, the previous heritage consultant, as well as Nicolas Baumann (peer review) [2016]
- Draft Heritage Impact Assessment from Stephen Townsend and Tim Hart, the heritage consultants for the project [2017]

1.2 DOCUMENT OUTLINE

The Urban Design Framework for the River Club site has been structured to include the following:

- An overview of the broader context and contextual informants, and the site itself.
- The identification of key observations and design indicators for the spatial systems of the site, the built form aspects such as scale, height & gateways, as well as aspects related to the connectivity of the site.
- The integration of the heritage-related design indicators articulated by the heritage consultants.
- The urban design recommendations for the spatial systems, built form components, and connectivity and accessibility.
- Finally, the document's conclusion sets out the main arguments and recommendations for the interpretation of the indicators on site

Please note that this document is aimed at identifying they urban design indicators and recommendations for the River Club site, and is not a comprehensive urban design framework.

02

CONTEXT

2.1 BROADER CONTEXT

The River Club site is located at the confluence of the Liesbeek and Black Rivers, approximately 4km East of Cape Town CBD. At a broad scale, it is bordered by Lower Observatory to the West, Maitland and Ndabeni to the East, and Paarden Eiland to the North.

2.2 IMMEDIATE CONTEXT

The site is bounded to the West by the original Liesbeek River watercourse (before canalization c.1943s), to the East by the canalized Liesbeek River and the Black River, and to the North by a road reserve earmarked for the extension of Berkley Road to connect Maitland to Observatory and Salt River via Malta Road (Θ). The confluence of the two rivers and canal around the site give it the character of an island in the landscape.

West and South-West of the site, the immediate context is the Liesbeek Parkway, the Black River Park office cluster, some sports fields and the industrial buildings of Lower Observatory beyond.

To the North, the surroundings are dominated by the PRASA rail yards including large sheds, administration buildings, train tracks and train carriages. The land immediately North of the road reserve and south of the Liesbeek River is owned by PRASA but currently used by the River Club as part of the golf course.

Immediately East of the site is the South African Astronomical Observatory (SAAO) complex and the Raapenberg Bird Sanctuary. Across the Black River is the M5 highway (Black River Parkway) and beyond this the M5 Park, Alexandra Psychiatric Hospital, and the industrial areas of Maitland and Ndabeni.

The small parcel of land immediately South of the site (*) is part of SAAO, and is earmarked for the development of head offices for SKA, expected to be in the region of 8 storeys. Beyond this is Observatory Rd (an extension of Station Rd), walking and cycling paths alongside the river, and the Hartleyvale sports fields .

The historic Valkenberg Psychiatric Hospital campus is located between the two rivers to the South-East of the River Club.

2.3 TWO RIVERS URBAN PARK (TRUP)

A process for a new development vision for the TRUP area is currently underway. One can however derive conceptual design ideas from previous work completed for the area, such as the TRUP SDF (2002).

Urban design considerations:

One the key objectives of TRUP is to activate the riverine system, for both ecological and recreational purposes. The development of the site and the distribution of land uses should ensure that it encourages interaction, for example creating restaurants and retail opportunities which edge onto the continuous green space system.

Development of the site should enhance the natural riverine environment for flora, fauna and pedestrians.

2.4 THE SITE

The site was originally established as a recreation club for employees of South African Railways & Harbours, and later Transnet. The sports fields and the rectangular patterns are visible on the 1930's map.

It has been known as The River Club since 1993, when the facility was established as a golf driving range. Over time the River Club has grown to include a restaurant, bar, conference facilities, and a 9-hole golf course.

The site is zoned as Open Space: Special Open Space (OS3) and owned by Liesbeek Leisure Properties Trust.