



KIVUKONI WATERFRONT

Public Place or Neglected Space?

A design proposal for a harbor area in Dar es Salaam, Tanzania



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PREFACE

We have developed a design proposal for Kivukoni Waterfront, a waterfront situated in the center of Dar es Salaam, Tanzania, for our master thesis in landscape architecture. The project started off by sending an e-mail to an architect working at Epitome Architects in Dar es Salaam, asking if she knew a specific area or project in the city that needed the professional knowledge of landscape architects. The thesis was performed as a Minor Field Study sponsored by SIDA. We wanted to examine public spaces abroad, in urban environments unlike our own. Spending nine weeks in Dar es Salaam, from the end of February to the end of April in 2014, we studied our project site as well as experienced and gathered as much understanding as possible of the culture and everyday life of the city. It has truly been a stimulating journey and learning experience. Not only have we made progress as landscape architects, but developed as persons. We gained international experience within our profession and learned how to keep an open mind and being flexible.

We hope that the thesis will raise knowledge about the importance of public space development in Dar es Salaam, and development of waterfronts in general. With this design proposal we hope to inspire and encourage the municipality and other stakeholders that would like to develop Kivukoni Waterfront in the future. In our opinion, Kivukoni can be a large asset to Dar es Salaam serving the public for recreational purposes, if planned and well-designed.

We would like to thank our Swedish supervisors, Rolf Johansson and Camilo Calderon, for their encouragement and careful feedback, as well as our Tanzanian supervisor Dr. Mrema, for interesting conversations. Also thanks to Mr. Ikumla and Dr. Mbisso, for introducing us to Ardhi University. We sincerely thank Tomas Eriksson and Tuula Eriksson, who supported us with tutoring since they have insight in the issues of Kivukoni Waterfront and the culture of the city. Finally we would like to thank Maria Ignatieva, who supported us with plant knowledge.

We would like to send a large thanks to everyone who supported us in Dar es Salaam, where we performed our fieldwork. This includes visitors at Kivukoni, local authorities, non-governmental organizations and private companies; their contribution has been crucial to the project. We would also like to send special thanks to the students Emmanuel, Elvis and David at Ardhi University who assisted us as interpreters during interviews with people at the project site. Without them this thesis and design proposal would not have been possible. A thank you also goes to Anna, Amanda and Jonna, who shared their experiences of the everyday life in Dar es Salaam and introduced us to the new environment. Last but not least, we send a large thanks to our families, friends and each other, for support and encouragement.

Asante sana!

Louise Candefjord & Linn Nilsson

Uppsala, August 2015



Figure 1. Linn Nilsson and Louise Candefjord, Arusha, Tanzania 2014.

ABSTRACT

Urbanization is occurring faster in Sub-Saharan Africa than anywhere else in the world (Africa Research Institute 2012, p. 1). The World Bank (2012b, pp. 181-182) states that Dar es Salaam is one of the fastest growing cities in Sub-Saharan Africa with an annual population growth rate of about 8 percent. Due to strained resources and incoherent governance the Dar es Salaam City Council is not able to provide basic urban services for the residents (UN-HABITAT 2009, p. 9). As a result, the urban environment is degraded and urban poverty increases (The World Bank 2002, p. 6). Buildings, roads and other services are prioritized in the planning process in many cities in developing countries, which exterminates green spaces (Mng'ong'o 2005, p. 6). This is also the case in Dar es Salaam, where green spaces are disappearing rapidly. The city center, referred to as the Central Business District, is characterized by a stressful city pulse of congestions, traffic jams and business people being an overrepresented target group. There is a lack of formal public spaces in the city center where people can elude the stressful city pulse, relax and recharge their batteries. What is interesting is that right in the Central Business District, in the exact area where Dar es Salaam was once founded, is an unplanned beach area known as Kivukoni Waterfront. The waterfront stretch is about one kilometer and is situated in a bay between two ferry terminals which act as major nodes. There are also several major landmarks adjacent, which mean a large amount of people are moving in this area. Kivukoni Waterfront is earmarked and mentioned as a site that should be developed as a public space for recreational purposes in the strategic document *Dar es Salaam Central Area Redevelopment Plan* and in the current master plan *Dar es Salaam Master Plan 2012-2032*. However, most parts of the waterfront are inaccessible today due to steep slopes and dense vegetation. Further, the area is littered and polluted, there are restaurant facilities of poor standard and homeless people are moving in the area, making it unhealthy and insecure. This thesis contains a design proposal of how the waterfront can be transformed into a public space, with the objectives of optimizing accessibility for everyone and increasing safety. The design is based on three main keys: connect, concentrate and commit, which help to enhance the existing strengths of the waterfront and address its weaknesses. We suggested five main destinations of different characters and activities, and a continuous beach promenade that acts as a spine by connecting the destinations and the waterfront with existing walkways and roads. The design language is a mix of organic shapes inspired by the ocean waves and strict shapes inspired by the urban landscape of the city center. If well-designed and well-functioning, the waterfront can have several positive impacts on the Central Business District and Dar es Salaam in general, which in turn can improve the well-being of many people.

SAMMANFATTNING

Detta examensarbete har genomförts som en Minor Field Study i Dar es Salaam, Tanzania. Projektet finansierades genom stipendium från SIDA, styrelsen för internationellt utvecklingsarbete.

INLEDNING

Det är vedertaget att urbaniseringen sker snabbare i Subsahariska Afrika än någon annanstans i världen (Afrika Research Institute 2012, s. 1). Allteftersom befolkningen i tätorterna växer snabbt ökar urbaniseringsnivåerna långsamt eller inte alls. Dessa grundläggande förändringar i urbaniseringstrender måste uppmärksammas av afrikanska regeringar, beslutsfattare och internationella givare för att förbättra situationen med arbetstillfällen, inkomst och ekonomisk utveckling i städerna.

Många landsbygdsinvånare migrerar till Tanzanias största stad, Dar es Salaam, och andra städer i jakt på sysselsättning, utbildning samt subventionerade eller gratis kollektiva varor och tjänster (The World Bank 2002, s. 6). Dar es Salaam har en befolkningstillväxt på drygt 8 procent per år (The World Bank 2012, ss. 181-182). Den snabba tillväxten i kombination med brist på resurser och osammanhängande styre har medfört att grundläggande urbana tjänster och infrastruktur inte kan tillgodoses (UN-HABITAT 2009, s. 9). Detta har i sin tur medfört en försämring av den urbana miljön och fattigdom (The World Bank 2002, s. 6). Den urbana tillväxten innebär att bostäder, vägar och annan infrastruktur prioriteras i planeringsprocessen, vilket ofta medför en förlust av grönområden (Mng'ong'o 2005, s. 6).

Kivukoni Waterfront är ett till största delen oplanerat strandområde som ligger mitt i centrala Dar es Salaam (figur 2). Strandområdet är ungefär en kilometer långt och sträcker sig mellan två färjeterminaler, en med avgångar till Zanzibar och en med avgångar till Kigamboni, fastland på andra sidan bukten. Strandområdet är markerat som ett grönområde i den senaste översiktsplanen *Dar es Salaam Master Plan 2012-2032* och i det strategiska dokumentet *Dar es Salaam Central Area Redevelopment Plan*. Alla berörda intressenter argumenterar för att platsen ska utvecklas som ett offentligt grönområde avsett för rekreation. Platsen har många kvaliteter. Det centrala läget innebär att stora noder och landmärken finns i omgivningarna, vilket bidrar till att det rör sig många människor längs Kivukoni Road. Andra kvaliteter är närheten till havet, hamnen och historiska byggnader, attraktiva vyer samt implementeringen av ett nytt kollektivtrafiksystem, Bus Rapid Transit, som kommer göra det lätt att ta sig till platsen från olika delar av Dar es Salaam. Dock har platsen även stora utmaningar. För närvarande är majoriteten av strandområdet inte tillgängligt på grund av stora höjdskillnader och tät vegetation. Andra utmaningar med platsen är nedskräpning, föroreningar samt hemlösa som uppehåller sig eller bor i området.

SYFTE OCH FRÅGESTÄLLNINGAR

Med detta projekt vill vi skapa de fysiska strukturer och funktioner som för närvarande saknas längs Kivukoni Waterfront, för att



Figur 2. Kivukoni Waterfront är ett till största delen oplanerat strandområde som ligger mitt i centrala Dar es Salaam.

kunna göra platsen tillgänglig och visa på hur den kan utvecklas till ett nytt offentligt rum och mötesplats. Syftet är därför att undersöka hur ett oplanerat vattennära område i centrala Dar es Salaam kan omvandlas till ett välbesökt offentligt rum avsett för rekreation.

Vår huvudfrågeställning är:

Hur kan Kivukoni Waterfront bli ett välplanerat och välfungerande offentligt rum och en populär mötesplats?

För att kunna besvara denna fråga behövde vi också utreda:

- Vilka riktlinjer finns för gestaltning av offentliga vattennära områden och vilka gestaltningsidéer kan appliceras på Kivukoni?
- Vilka offentliga rum och grönområden finns i Dar es Salaam och framförallt i Central Business District och hur används de?
- Vilka är de nuvarande markanvändningarna längs Kivukoni Waterfront och vilka intressenter berörs?
- Vad kan en utveckling av platsen bidra med till Dar es Salaam och särskilt till CBD?
- Vilka huvudsakliga kvaliteter och problem finns på platsen och dess omgivning?
- Vilka platsspecifika gestaltningslösningar och funktioner bör skapas längs med Kivukoni Waterfront?

AVGRÄNSNINGAR

Undersökningen av vattennära områden avgränsades tematiskt till att enbart undersöka offentliga rum i urbana miljöer och geografiskt till vattennära områden med liknande förutsättningar som Kivukoni, till exempel klimat, markanvändning (innan områdena omvandlades till offentliga rum) storlek och läge i staden. Undersökningen av offentliga rum och grönområden i Dar es Salaam och Central Business District avgränsades tematiskt till att enbart undersöka den nuvarande situationen med offentliga rum och grönområden, det vill säga vilka typer som finns och hur människor använder staden generellt. Vi tittade även till viss del på stadsplaneringsprocessen och framtida planer för utvecklingen av offentliga rum och grönområden. Geografiskt avgränsades detta ämne till att undersöka platser i Central Business District med omnejd. Vi inkluderade alla typer av offentliga rum och grönområden det vill säga parker, gator, torg osv. Undersökningen av själva platsen avgränsades geografiskt till en plats; Kivukoni Waterfront. Tematiskt avgränsades undersökningen av Kivukoni till att titta på vilka platsspecifika gestaltningslösningar som kan skapas. Vi valde att inte göra några förändringar i gestaltningen av vägen, förutom att lägga till övergångsställen. Vi inkluderade sociala aspekter så långt det var möjligt i gestaltningen. Ekonomiska och tekniska aspekter har exkluderats, samt lagar gällande gestaltningen och olaglig ockupering av offentliga rum. Fokus har varit att visa mer på platsens karaktär och rumsliga upplevelser. Vi gestaltade några områden mer i detalj medan resten av området visas mer i en konceptuell gestaltning.

MÅLGRUPPER

Uppsatsen riktar sig till Ilala Municipal Council, samt andra intressenter som Tanzania Ports Authority, Dar Rapid Transit Agency och Hyatt Regency Dar es Salaam, The Kilimanjaro, för att visa på hur platsen kan utvecklas som en offentlig plats för rekreation. Projektet ska ge inspiration och uppmuntran för framtida utveckling av Kivukoni Waterfront. Uppsatsen vänder sig också till invånare i Dar es Salaam, framförallt personer som arbetar och verkar i Central Business District. Yrkesverksamma och studenter inom landskapsarkitektur och samhällsplanering bör också finna uppsatsen intressant. Uppsatsen kan även vara intressant för de som är generellt intresserade av projekt kopplade till offentliga rum i vattennära områden i utvecklingsländer. Slutligen riktar sig uppsatsen även till SIDA som gjorde projektet möjligt från första början genom sponsring av stipendier.

METOD

Arbetet utfördes i tre steg genom att undersöka tre aspekter:

- Vattennära områden
- Offentliga rum och grönområden i Dar es Salaam och Central Business District
- Kivukoni Waterfront

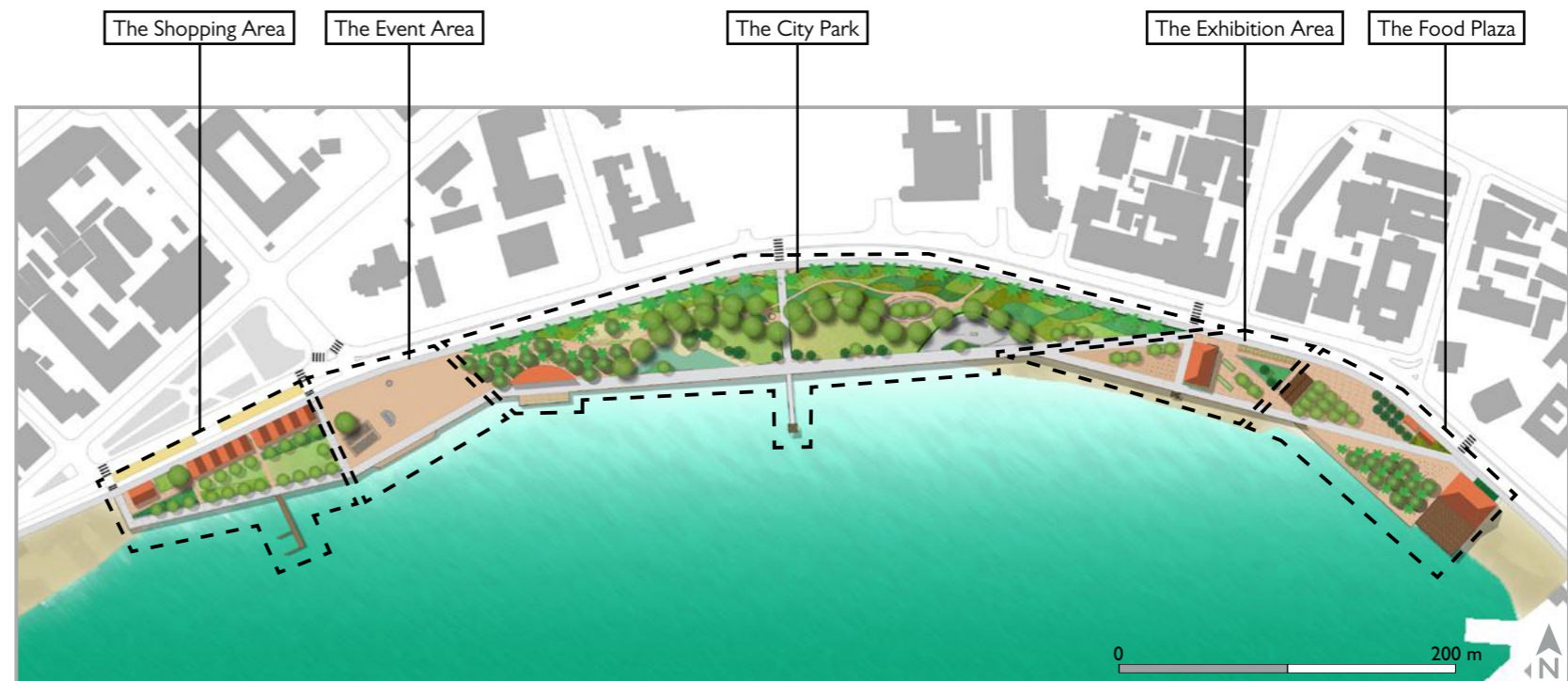
De två första aspekterna undersöktes för att skapa en grund för gestaltungs-förslaget. De metoder som vi använt oss av är följande:

- Litteraturstudier
- Referensprojekt
- Platsbesök
- Halvstrukturerade intervjuer
- Kartläggning och analysering
- Design process

Några av metoderna ovan användes i alla steg medan några enbart användes i ett steg. I tredje steget kartlade vi följande aspekter: arkitektur, vegetation, topografi, mikroklimat, ljud, fast avfall samt offentliga och privata områden. Vi gjorde följande analyser: vyer, trygghet, aktiviteter (baserad på Gehls teorier) och stadsstruktur (baserad på Lynchs teorier). En SWOT-analys användes för att sammanfatta platsens huvudsakliga kvaliteter och problem. I visualiseringsprocessen använde vi digitala verktyg som AutoCAD och Adobe-paketet.

BAKGRUND

Kivukoni Waterfront och dess omgivningar har präglats starkt av stadens historia eftersom det var just på denna plats som staden en gång växte fram. Dar es Salaam har varit koloniserad av både araber, tyskar och briter vilket har bidragit till segregation i staden och en blandad arkitektur i Central Business District, särskilt längs med Kivukoni Road. Historiska byggnader från olika eror blandas med moderna höghus. Några av de mest framträdande problemen i staden är bristen på infrastruktur, undermålig avfallshandling, brist på rent vatten, oplanerade områden och informella bosättningar, trafikstockningar, fattigdom och segregation (UN-HABITAT 2009, ss. 11-12, UN-HABITAT 2010b, s. 18, Smiley 2013, s. 215), se figur 4 och 5. Kivukoni Waterfront påverkas både direkt och indirekt av dessa problem. Till exempel använder många som går längs med Kivukoni Road grönområdet som en plats att kasta skräp. Kivukoni Road och anslutande vägar är ofta drabbade av trafikstockningar. Det saknas ofta trottoarer och gångvägar i centrum vilket skapar osäkra trafikmiljöer. Obehandlat avloppsvatten från centrum släpps ut direkt i havet vilket orsakar föroreningar och ett allvarligt hot mot stränderna och den marina miljön (Ministry



Figur 3. Förslagets illustrationsplan. Gestaltningen bygger på fem större rum: The Shopping Area, The Event Area, The City Park, The Exhibition Area och The Food Plaza, samt en strandpromenad som fungerar som en ryggrad genom att binda samman rummen och skapa kontinuitet. Formspråket inspirerades av vågornas mjuka organiska rytm och rörelser samt CBD: s strikta urbana landskap.

of Land and Human Settlements Development u.å., s. 23). Majoriteten av Central Business District består av kontor och institutioner, vilket medför att centrum drabbas av trängsel och trafikstockningar på arbetstid och är i princip helt övergivet på kvällar och helger.

Med tanke på den tydliga bristen på tillgängliga och välplanerade offentliga rum och grönområden i Dar es Salaam generellt men särskilt i centrum, anser vi att Kivukoni är en försummad tillgång som skulle kunna bidra med många värden till staden förutsatt att



Figur 4. Trafikstockning är ett vanligt förekommande problem i Dar es Salaam. Bilden visar en trafikstockning i Central Business District längs Kivukoni Road i riktning mot Zanzibar färjeterminal.



Figur 5. Undermålig avfallshandling resulterar i att avfall dumpas illegalt, oftast på offentliga platser, som i bilden på Coco Beach. Foto: © Mina Karlsson and Emelie Maniette.

platsen utvecklas till ett välplanerat och välfungerande offentligt rum.

GESTALTNINGSFÖRSLAGET

Vår vision är att skapa en ny stadspark och att förvandla Kivukoni Waterfront till stadens framsida genom att ge platsen en stark identitet. En flexibel utformning kommer att erbjuda ett brett utbud av aktiviteter som lockar och tillgodoser behoven hos olika målgrupper som till exempel invånare i Dar es Salaam, besökare och turister. Kivukoni ska bli en plats där människan och fotgängaren är i fokus. Våra främsta programpunkter är att göra platsen tillgänglig för alla, öka antalet offentliga verksamheter, öka tryggheten och framhäva befintliga kvaliteter på platsen som till exempel attraktiva vyer, närheten till havet samt närhet till många stora noder, landmärken och historiska byggnader.

Utifrån analyser av de tre aspekterna tog vi fram ett koncept som bygger på tre riktlinjer:

- ↔ Länka
- 🔒 Locka
- ♥ Engagera

Länka syftar till att länka samman platsen med dess omgivning – havet, staden, befintliga stråk, noder och landmärken. *Locka* syftar till att skapa rum längs med platsen som har olika karaktär och erbjuder unika aktiviteter och funktioner som lockar besökare. Rummen är The Shopping Area, The Event Area, The City Park, The Exhibition Area och The Food Plaza. *Engagera* syftar till att engagera människor, stödja lokala verksamheter och skapa nya jobbomöjligheter. Till exempel har vi föreslagit en marknad där försäljare kan hyra plats för att sälja frukt och andra lokala råvaror. Nya jobb skapas genom de nya verksamheter som föreslås det vill säga butiker, ett café, en utställningshall och en restaurang. På The Event Area kan besökare engagera sig i olika evenemang som till exempel konserter, ceremonier, festivaler, marknader och tal samt ta del av den utpräglade musik- och danskulturen som finns i Tanzania.

Formspråket är inspirerat av vågornas mjuka, organiska rytm och rörelser i Indiska Oceanen samt det strikta urbana landskapet i Central Business District. Strandpromenaden fungerar som en ryggrad som skapar en kontinuitet och binder samman de fem rummen. Den har också varit viktig för att länka samman stora noder och landmärken som till exempel färjeterminalerna, den nya busshållplatsen och Lutheran Church. Det finns fem huvudentréer till platsen med övergångsställen längs Kivukoni Road, ett till varje rum.

För att lösa höjdskillnaderna skapade vi en klassisk kajkant, vilket innebär att grönområdet och delar av stranden har höjts upp. Detta för att skapa en plats som är lättillgänglig för alla, skapar kontakt med resten av centrum, framhäver de attraktiva vyerna och som är lättöverskådlig.

Följande är en kort beskrivning av rummens huvudsakliga utformning och aktiviteter:

THE SHOPPING AREA

Detta rum erbjuder främst kommersiella verksamheter i form av olika butiker och kiosker (figur 3). Verksamheterna är kopplade till den nya busshållplatsen, en liten befintlig park belägen precis norr om busshållplatsen samt kommersiella aktiviteter i Central Business District. Här finns även offentliga toaletter, samt ett grönområde och tre långsträckta bänkar längs med strandpromenaden.

THE EVENT AREA

Rummet är en öppen oprogrammerad yta avsedd för olika typer av evenemang som till exempel konserter, festivaler, marknader, ceremonier, gudstjänster och tal (figur 3 och 6). Här finns också en unik bänkformation som knyter an till bänkformationen inne i Lutheran Church.



Figur 6. Konsert på The Event Area. Rummet kan användas för olika typer av evenemang där besökarna kan ta del av Tanzanias utpräglade musik-, dans- och matkultur.

THE CITY PARK

The City Park är det största rummet och är ett avlångt grönområde präglad av klassisk parkmiljö (figur 3 och 7). Gångvägar, bänkar och de mindre rummen The Café Area, The Sea Play, The Game Room och The Skate Park omges av frodiga planteringar, flexibla gräsytor och skuggande träd.



Figur 7. The City Park – ett avlångt grönområde präglad av klassisk parkmiljö med frodiga planteringar, flexibla gräsytor, slingrande gångvägar med bänkar placerade i skuggan av African tulip träd.

THE EXHIBITION AREA

Det här rummet består av en utställningshall och en entréyta med planteringar, sittplatser och låga fontäner (figur 3). Rummet är avsett för att kunna lära sig mer om platsens och stadens historia samt upptäcka lokal konst och lokala hantverk som är unikt för Dar es Salaam.

THE FOOD PLAZA

Detta rum består av två mindre rum: The Market och The Restaurant (figur 3). The Market är en öppen yta där försäljare kan sälja frukt och andra råvaror kombinerad med upphöjda planteringar med bänkar runt och skuggande träd där kunderna kan sitta (figur 8). The Restaurant består av en restaurang och ett trädort med planteringar och sittplatser runt träden.



Figur 8. The Market – en del av rummet The Food Plaza. Här kan försäljare hyra plats för marknadsstånd där de kan sälja frukt och andra lokala råvaror. Besökare kan sitta och slappna av i skuggan av Flamboyant träden.

DISKUSSION

Utveckling av offentliga rum och grönområden är en långsam process i Dar es Salaam. Utifrån våra analyser kan det dock konstateras att det finns ett stort behov av dessa typer av platser i staden, och att det dessutom finns flera försummade områden som skulle kunna utvecklas till välplanerade offentliga rum och på så sätt förstärka stadens identitet och attraktivitet. Att bostäder, vägar och annan infrastruktur prioriteras i planeringsprocessen innebär att offentliga rum och grönområden riskerar att försvinna. Vi tror också att den snabba urbaniseringen medför att behovet av offentliga rum och grönområden kommer att öka. Dock innebär bristen på resurser att det är svårt att finansiera utvecklingsprojekt av denna typ av platser.

I sökandet efter riktlinjer som finns för gestaltning av offentliga rum i vattennära områden hittade vi enbart tre dokument varav alla skapade av samma företag. Det var därför svårt att dra generella slutsatser om hur offentliga rum i vattennära områden bör gestaltas. En av riktlinjerna ”The water itself draws attention” antyder att vattnet bör vara i fokus och den största attraktionskraften. Vi fann detta svårt eftersom rent vatten i Dar es Salaam är en bristvara. För att förslaget ska kunna realiseras och bli en attraktiv plats med tillfredsställande upplevelser förutsätter att situationen med avfall och föroreningar förbättras.

Avgränsningen att inte förändra gestaltningen av Kivukoni Road har haft stor påverkan på gestaltungsförslaget, eftersom vi har föreslagit en tydlig separering av vägen och strandområdet. Om

det hade varit mindre trafik längs Kivukoni Road kanske förslaget hade fokuserat mer på att integrera strandområdet med vägen.

Vi valde att utveckla Kivukoni Waterfront som en del av den urbana staden snarare än ett typiskt strandområde, av olika anledningar. En anledning är att havet är kraftigt förorenat och både hav och strand är nedskräpade, vilket innebär att det är en ohälsosam badplats. Dessutom ville vi länka samman strandområdet med resten av CBD samt göra området tillgängligt för alla vilket var enklast att åstadkomma genom att höja upp området.

Tryggheten på platsen har varit ett problem, vilket vi haft i åtanke i gestaltningen. Till exempel har vi strävat efter att skapa små höjdskillnader och glesare vegetation vilket innebär att platsen är lätt att ta sig fram på och lätt att överskåda. Vi har planerat för aktiviteter under hela dygnet, eftersom närvaron av människor ökar tryggheten. Dessutom har vi planerat för att tilltala många olika typer av målgrupper, vilket minskar risken för segregering. Marinpolisen har fått ett nytt läge och ligger nu i den västra delen av strandområdet. Att marinpolisen finns kvar och patrullerar området är en viktig trygghetsfaktor.

Informella aktiviteter som till exempel försäljning av frukt och grönsaker och människor som sover, lagar mat eller tvättar präglar platsen i dagsläget. Vi har inte velat utesluta några grupper av människor, och har därför planerat två mer oprogrammerade områden där några av dessa aktiviteter kan få ta plats i formella sammanhang. Till exempel har vi föreslagit en yta för marknad där försäljare kan hyra plats för marknadsstånd i The Market.

Gestaltungsförslaget underlättar för avfallshantering eftersom det finns välplacerade soptunnor och återvinningsstationer, men i framtiden hänger det mycket på kommunen och Green Waste Pro Limited samt platsens besökare att ta ansvar för att avfallshanteringen ska fungera.

Detta är ett kostsamt projekt som kommer att behöva finansieras av externa investerare. En potentiell extern investerare är ägaren till Hyatt Regency Dar es Salaam, The Kilimanjaro, som har uttryckt en önskan om att skapa en offentlig park framför hotellet.

Det är viktigt att vända den negativa trenden med att Central Business District är övergivet på kvällar och helger för att öka tryggheten. Vi tror att Kivukoni Waterfront kan spela en viktig roll i detta problem, genom att bidra med rekreativsmöjligheter och nya kommersiella verksamheter kommer centrum att kunna erbjuda mer än enbart arbetstillfällen.

ABBREVIATIONS

ARU	Ardhi University
BRT	Bus Rapid Transit
CABE	Commission for Architecture and the Built Environment
CBD	Central Business District
DCC	Dar es Salaam City Council
DSM	Dar es Salaam
DART	Dar Rapid Transit Agency
IMC	Ilala Municipal Council
NGO	Non-governmental organization
PPP	Public Private Partnership
PPS	Project for Public Spaces
TPA	Tanzania Ports Authority
TZS	Tanzanian Shillings
SWM	Solid waste management

DEFINITIONS AND TERMINOLOGY

Bajaji: a motorized tricycle with seats for up to three people.

Boda boda: local motorcycle taxis.

Bustani: the Swahili word for garden. In Swahili there is no word for park, which means “bustani” is used when speaking of gardens, parks or other green space within the city.

City: a large town (Oxford University Press 2015a).

City center: in this report city center has the same meaning as CBD.

Daladalas: local mini buses which are privately owned and used for public transportation within cities in Tanzania.

Exotic plant species: plants that are found outside their native environments.

Green space: a defined area of grass, trees and other vegetation in urban areas.

Harbor: a protected bay or other area in the water, often with port facilities, where ships can anchor. (Webster’s New World College Dictionary 2010a).

Informal settlement: settlements where housing is not following current planning and building regulations.

Infrastructure: basic facilities and installations that help a government or community to run, such as roads, schools, power lines, sewage treatment plants.

Kivukoni: in this report Kivukoni is sometimes used as a shortening for Kivukoni Waterfront.

MFS: Minor Field Study. A scholarship programme for field studies in a developing country in a minimum of eight weeks sponsored by SIDA. MFS is intended for students at Swedish universities. During the fields studies the student collect information to their candidate or master thesis. The purpose of MFS is to gain international experience and knowledge about developing countries and developing issues. (SIDA 2014a).

Native plant species: plants that have developed, occur naturally, or existed for many years in a certain area.

NGO: a non-governmental organisation.

Open space: unexploited area.

Port: “a place on the coast at which ships can shelter, or dock to load and unload cargo or passengers” (English Wiktionary n.d.).

Private: “of, belonging to, or concerning a particular person or group; not common or general: *private* property” (Webster’s New World College Dictionary 2010b).

Public: “for the use or benefit of all; esp., supported by government funds: a *public* park” (Webster’s New World College Dictionary 2010c).

Public green space: a defined area of grass, trees and other vegetation in urban areas that is open and accessible for everyone where there are no fees or obligations to buy anything.

Public space: an area open and accessible for everyone where there are no entrance fees or obligation to buy something.

Restricted green space: a defined area of grass, trees and other vegetation in urban areas that is not completely public or inaccessible. Reasons for this can be a result of the site’s physical prerequisites or design or that there is an entrance fee.

Semiprivate: “partly but not completely private” (Webster’s New World College Dictionary 2010d).

Semipublic: partly public, for instance a private institution offering some public services or facilities (Webster’s New World College Dictionary 2010e).

SIDA: Swedish International Development Cooperation Agency. “SIDA is a government agency working on behalf of the Swedish parliament and government, with the mission to reduce poverty in the world (SIDA 2014b).

The Ministry of Lands, Housing and Human Settlements Development: former Ministry of Land and Human Settlements Development.

Town: a built-up area that is larger than a village and in general smaller than a city (Oxford University Press 2015c).

UN-HABITAT: United Nation Human Settlements Programme. “Our mission is to promote socially and environmentally sustainable human settlements development and the achievement of adequate shelter for all” (UN-HABITAT, n.d.).

Urban: there is no general definition of what urban means. Seto, Parnell & Elmqvist (2013, p. 3) inform that urban is “often defined as an area with human agglomerations and with >50 % of the surface built, surrounded by other areas with 30–50 % built, and overall a population density of more than ten individuals per hectare”.

Waterfront: “a part of a town that borders the sea or a lake or river” (Oxford University Press 2015d). In this report we refer to any part of a town or city that borders to a body of water.

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1

INTRODUCTION

AIM, DELIMITATIONS AND TARGET GROUPS

Chapter one introduces the project background and the key issues regarding public green space development and city planning in Dar es Salaam (DSM). Thereafter, the project site is introduced and motifs for developing Kivukoni Waterfront into public space are debated. Next section presents the problem statement of the thesis which is followed by the aim, research questions and delimitations. Finally, the chapter defines the target groups of this thesis.

Introduction

Following sections are a brief introduction of the project background and the project site followed by aim and research questions, delimitations and target groups.

PROJECT BACKGROUND

It is widely believed that urbanisation is occurring faster in Sub-Saharan Africa than anywhere else in the world due to natural births and rural-urban migration (Africa Research Institute 2012, p. 1). Yet, as the populations of urban areas are growing rapidly, the urbanisation levels of many countries are increasing slowly or not at all. These fundamental changes in urbanisation trends need to be acknowledged by African governments, policy makers and international donors in order to improve situations of urban employment, incomes and economic development.

UN-HABITAT (2009, p. 20) informs that a rapid development and massive population growth has occurred over the past ten years in the urban centers of Tanzania. Many rural dwellers migrate to Tanzania's largest city, DSM (figure 9), and other cities in the search of employment, education as well as subsidized or free public goods and services (The World Bank 2002, p. 6). As a consequence, the rapid urbanization sets a higher demand on urban services and the urban environment.

The World Bank (2012, pp. 181-182) states that the annual population growth rate is about 8 percent in DSM, being one of the fastest growing cities in Sub-Saharan Africa. UN-HABITAT (2009, p. 9) argues that due to strained resources and incoherent governance the Dar es Salaam City Council (DCC) is not able to

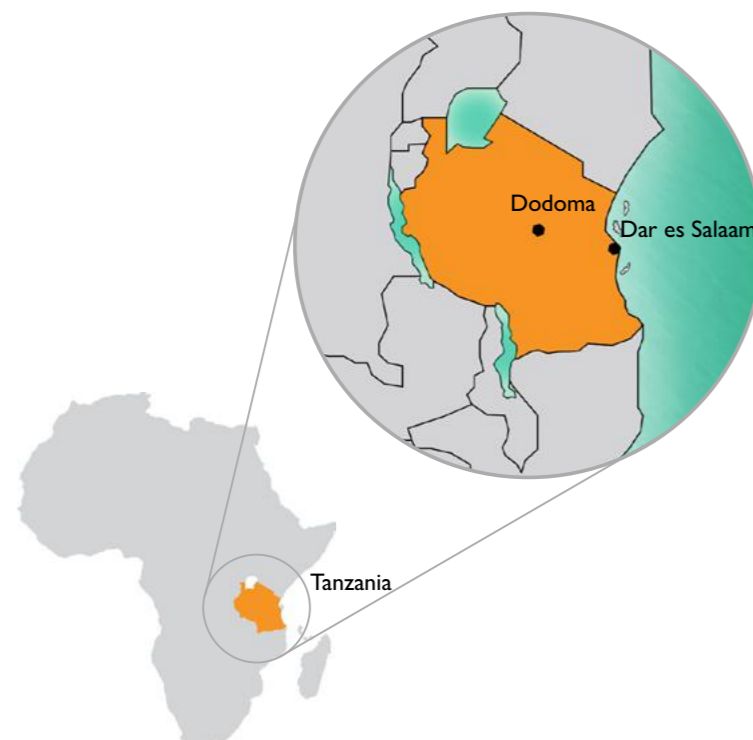


Figure 9. Tanzania is situated in the east coast of Africa with DSM along the coast.

provide basic urban services and infrastructure for the residents. This poses issues such as degradation of the urban environment and urban poverty (The World Bank 2002, p. 6). UN-HABITAT (2009, p. 11) informs that urban poverty in turn generates an increase of crime and inequalities.

Over 80 percent of the population in DSM lives in unplanned settlements (UN-HABITAT 2010a, p. 17). The World Bank (2002, p. 7) informs that urban growth is often resulting in expansion of informal settlements. Unplanned areas often lack basic infrastructure and the residents are usually poor hence not able to pay for services. The authorities themselves cannot improve or maintain infrastructure and services due to limited resources.

In many cities in developing countries, buildings, roads and other services have become a priority in the planning process which exterminates green spaces (Mng'ong'o 2005, p. 6). As a conclusion, urban growth poses an increasing demand for housing and infrastructure which cause threats to public space and green space. It might seem that public space development is of minor priority or even insignificant in DSM where a large part of the population is struggling to survive the day. About half of the population lives on less than one USD dollar per day (The World Bank 2012, p. 181). Yet considering the rapid urbanization, maybe it is precisely in DSM where development of public space is needed the most, where it can contribute to the well-being of people. In addition, the culture and climate of DSM result in a vivid outdoor life in streets and other leftover open spaces due to the lack of formal public spaces.

THE PROJECT SITE

Kivukoni Waterfront, also known as Azania Front, is a one kilometer long beach area between Kivukoni Road and the Indian Ocean, located in the Central Business District (CBD) in DSM (figure 11). The waterfront is located between the Zanzibar ferry terminal in the west and Kivukoni ferry terminal in the east (figure 12). Kivukoni Waterfront is owned by Tanzania Ports Authority (TPA), but falls under the jurisdiction of Ilala Municipal Council (IMC). TPA previously had plans to develop the area for port activities, but during interviews it became clear that both TPA and IMC argue that the waterfront should be developed as a public space for recreational purposes.

Being situated in a bay in the Indian Ocean, right in the very center of DSM, Kivukoni Waterfront has major potential to become a new public green space for several reasons. Since the urban population is increasing rapidly the demand for new residential areas will increase which poses a threat to existing public spaces. Considering the lack of public space in DSM in general and in particular in the CBD where there are only a few isolated recreational and open spaces (Ministry of Land and Human Settlements Development n.d., p. 10), Kivukoni Waterfront is a neglected asset today that could have great importance to the inhabitants of DSM, if well-planned and well-

designed for public purposes (figure 10). A development of the waterfront can act as a model for other similar open spaces and be a starting point for a network of high quality public spaces in the CBD and DSM, which can improve the life quality of many people.

Following are the main arguments to why we believe Kivukoni should be developed into a public green space:

- The waterfront is earmarked as a public space in a map of future land use in the strategic document *Dar es Salaam Central Area Redevelopment Plan*, and is mentioned in the latest master plan *Dar es Salaam Master Plan 2012-2032* as an area suitable for recreational purposes.
- Stakeholders like Dar Rapid Transit Agency (DART), IMC, Hyatt Regency Dar es Salaam, The Kilimanjaro and TPA argue that Kivukoni should be developed as a public space for recreational purposes.
- There is a lack of public space and green space in DSM and in particular in the CBD.
- A development of the waterfront can strengthen the identity of DSM and even make the city gain an identity in a global aspect.
- The waterfront has attractive surroundings e.g. the Indian Ocean, the port of DSM, historic buildings and environments, ferry terminals and major landmarks.
- The central location creates a constant presence of people along Kivukoni Road.
- People see a large potential in the site and want to be able to utilize it as a public space.
- The implementation of a new public transportation, referred to as the Bus Rapid Transit (BRT) will make it easy to reach the site from different parts of DSM.
- If no intervention is initialized the waterfront will be further degraded which will limit future development opportunities.



Figure 10. Kivukoni Waterfront can become a high quality public space that can improve the life quality of many people if well planned.

However, Kivukoni Waterfront currently has several challenging issues. The main parts of the waterfront are not being utilized, due to the current physical, social and environmental conditions. The physical conditions include steep slopes and dense vegetation which makes the site inaccessible and insecure. Social conditions include issues of squat establishments and homeless or unemployed people idling or living in the area, which poses insecurity. The environmental conditions include solid waste which is littered along the entire shoreline, the water is heavily polluted and there are abandoned shipwrecks at the shore. This poses an unhealthy environment which is gradually being degraded.

AIM AND RESEARCH QUESTIONS

With this project we want to provide the physical structures and functions that are currently missing at Kivukoni Waterfront, in order to make the site accessible and develop it into a public space and vibrant meeting place. Therefore, the aim is to examine how an unplanned waterfront in the center of DSM can be transformed into a well-visited public space for recreational purposes. The goal is to create a design proposal for Kivukoni Waterfront, which can inspire and guide other public space projects in cities in developing countries.

Our main research question is:

How can Kivukoni become a well-designed and well-functioning public waterfront and a vibrant meeting place?

In order to answer this question, we also need to know:

- What guidelines direct the design of public waterfronts and which guidelines and design features are applicable to Kivukoni?
- What public spaces and green spaces exist in DSM and in particular in the CBD and how do people use them?
- What are the current land uses of the waterfront and which stakeholders are concerned?
- What can a development of the site contribute with to DSM and in particular to the CBD?
- What are the key qualities and issues of the site and its surroundings?
- What site-specific design solutions and functions should be developed along Kivukoni Waterfront?

DELIMITATIONS

Following section describes how the three main topics have been delimited.

WATERFRONTS

This topic was thematically delimited to examining public waterfronts in urban areas and geographically delimited to waterfronts with similar prerequisites as Kivukoni Waterfront including climate, previous land use (before the public space intervention), size and location in the city.

PUBLIC SPACE AND GREEN SPACE IN DSM AND CBD

The literature study of public space and green space in DSM was thematically delimited to examining the current situation of public space and green space, how people use the city in general, and how the city planning works. We excluded dealing with governance issues when it comes to the understanding of the city. The site observations were geographically delimited to examining public space and green space in or in the outskirts of the CBD. We included all types of public space and green space e.g. squares, parks, waterfronts, streets and so on. Thematically, the site observations in the CBD were limited to examining the design and structure, density of people as well as activities.

KIVUKONI WATERFRONT

The design proposal was geographically delimited to one site: Kivukoni Waterfront. The area of the design proposal stretches from Kivukoni Road in the north down to the shore in the south; and from the Kivukoni ferry terminal in the east to the end of Bustani ya Posta in west (figure 12). We will not alter the BRT design of Kivukoni Road. Only small changes like adding crosswalks will be suggested to better integrate the BRT with our design. Thematically the study was limited to investigating what key issues that needs to be addressed to develop the site into public space, as well as how Kivukoni can be connected to its surroundings, and what activities that should be suggested. Hence our main focus was to examine what site-specific design solutions that should be created along the waterfront. We included dealing with social aspects and insecurity to the extent possible through design solutions. We also identified stakeholders and possible conflicts and synergies between them. We excluded technical and economic aspects which mean no construction drawings or budget plan will be presented. We also excluded legal aspects of the design and illegal occupation of public space. The focus was to show the overall character of the site, its planned functions and activities as well as its spatiality by visualizing through illustrations plans, cross sections, details and perspectives. We designed two areas in detail and showed the rest of the waterfront in a more general and conceptual design.



Figure 11. Kivukoni Waterfront is situated in the center of DSM, in the CBD. Map based on: Kironde, 1994; SDP, 1998; MLHSD, 2000 in Lupala 2002, pp. 34-35.



Figure 12. The geographic limitation of the design proposal.

TARGET GROUPS

This thesis turns to several target groups. It turns to stakeholders and potential investors of the development of Kivukoni Waterfront. The stakeholders are IMC, DART, TPA and Hyatt Regency Dar es Salaam, The Kilimanjaro. The project should provide inspiration and encouragement for future development of the waterfront. Moreover, people living in DSM and people working in or visiting the CBD should hopefully also find this project interesting. It also turns to professionals and students within the fields of landscape architecture, architecture and urban planning. Since landscape architecture is a quite new profession in Tanzania, this thesis can act as an inspiration to the existing workforce and students in the future development of the profession. The thesis may also be interesting for those generally interested in public space projects at waterfronts and in developing countries. Finally, the thesis also turns to SIDA which made the field study possible by the sponsoring of scholarships.



METHODOLOGY

THE WORK PROCESS

This chapter describes the methodologies that were conducted during this research. It provides a detailed description of how the methods were practiced throughout three work stages. Moreover, it argues for the motifs of the selected methods, for instance outlining why semi-structured interviews and site observations was vital to the project. The chapter ends by discussing the methods.

Three work stages

We divided the work of this thesis into three stages (figure 13), which were conducted simultaneously. We were working as a team throughout the entire project, hence the written parts and the illustrations is a result of a close cooperation. Parts of the work were divided, but all parts were discussed in order to reach a result that corresponds with our common vision for the final product.

There are two common methodologies that we conducted at each stage; literature studies and site observations. Other methodologies were conducted only at one stage. The motifs for the selected methodologies and how we practiced them at each stage will be outlined in detail in the following sections.

PRELIMINARY STUDIES

Making research about the country and city was the main focus before the field studies in DSM, in order to gain insight in what type of issues that had to be addressed and what information that was required. Preparing a time schedule was important to understand what needed to be conducted before, during and after the field studies in DSM.

FIRST STAGE – WATERFRONTS

The first work stage was to examine public waterfronts. This included studies of how public waterfronts should be designed and which design features and guidelines that can be applied to Kivukoni Waterfront. This stage included literature studies, reference projects and site observations.

LITERATURE STUDIES

The literature studies were carried out to obtain information about the reference projects and to complete the background information about waterfronts. We were searching for background information outlining the definition of a waterfront, the emergence of waterfronts, benefits of transforming waterfronts into public space and which guidelines that direct the design of public waterfronts. We searched in databases such as Google, Primo and Libris with the following keywords: waterfront, urban water design, waterfront design, water landscapes and urban water. We mainly used the book *The new waterfront: a worldwide urban success story* by Ann Breen and Dick Rigby. It provided background information as well as information about the reference projects of Boat Quay and Kuching Waterfront. The following books complemented the background information: *Waterfront Regeneration: Experiences in City-building* by Harry Smith and Maria Soledad Garcia Ferrari and *Transforming Urban Waterfronts: Fixity and Flow* by Gene Desfor, Jennefer Laidley, Quentin Stevens and Dirk Schubert. The document *Stone Town Sea Front Rehabilitation: Forodhani Park* by Aga Khan Trust for Culture contributed with

information about the reference project of Forodhani Park. The documents *How to Transform a Waterfront* and *10 Qualities of a Great Waterfront Destination* by Project for Public Spaces (PPS) provided guidelines that direct the design of public waterfronts.

REFERENCE PROJECTS

The reference projects include three public space projects at waterfronts around the world that we gained inspiration from. It was important to have similar projects that we could relate to and be inspired by when creating our design proposal for Kivukoni, considering the cultural differences compared to Sweden and the fact that Kivukoni Waterfront is a large scale area, which was new to both of us. The criteria for selecting the reference projects was that they had to have similar prerequisites as Kivukoni including climate, location in the city, previous land use (before the public space intervention), size and shape (Kivukoni Waterfront is about 1 kilometer long and 60 meters at the widest part).

The reference projects that we examined were Boat Quay, Singapore, Kuching Waterfront, Malaysia, and Forodhani Park, Zanzibar. Boat Quay was examined mainly because of its central location in the city with office towers adjacent (Breen & Rigby 1996, p. 122), which is similar to the location of Kivukoni Waterfront. Kuching Waterfront was examined mainly since the size of the area is very similar to Kivukoni. The waterfront is one kilometer long and 25 meters wide at the thinnest part and 60 meter at the widest part (Breen & Rigby 1996, p. 148). Since there is an illustration plan of Kuching Waterfront in the book *The New Waterfront: a worldwide urban success story* by Ann Breen and Dick Rigby we could measure certain elements in the design. This entailed a perception of reasonable measurements of different elements such as green areas, width of walkways and size of buildings. Another reason for looking at Kuching was because it has a wide range of recreational activities. This was important in order to get a realistic perception of how many functions that ought to be proposed along a one kilometer stretch of waterfront. Kuching also has a tropical climate which made it possible to propose similar activities. The previous land use before the public space intervention of Boat Quay and Kuching are similar to the current land use at Kivukoni Waterfront that is squat establishment, waste disposal and harbor related activities.

SITE OBSERVATIONS

We conducted four site observations of the reference project of Forodhani Park in Zanzibar. Since Zanzibar belongs to Tanzania, Forodhani Park has very similar prerequisites as Kivukoni Waterfront which provided an equivalent reference project to relate to. For instance, it is located by the Indian Ocean and has nearly the same climate and very similar culture. We observed



Figure 13. The work of this thesis was divided into three work stages: waterfronts, public space and green space in DSM and CBD, and Kivukoni Waterfront. The figure shows which methods that were conducted at each stage, the main research questions and how we reached the final design proposal.

the design and structure as well as activities of the site. We made two site observations during morning, one in the afternoon and one in the evening, to gain a wide picture of what activities that take place. The site observations were performed the Sunday 13th and Monday 14th of April during low season (rainy season occurs March – April).

SECOND STAGE – PUBLIC SPACE AND GREEN SPACE IN DAR ES SALAAM AND CENTRAL BUSINESS DISTRICT

The second work stage meant examining public space and green space in DSM and CBD in order to gain an overall understanding of what public space and green space exist and how people use it. We display public space and green space separately in this thesis since we wanted to highlight the fact that existing green spaces in DSM are often restricted for varying reasons hence not public.

Examining public space and green space in the CBD posed an understanding of what the CBD is lacking and how Kivukoni should be developed in order to meet the future needs of the CBD. The second work stage included the methods literature studies, site observations and semi-structured interviews.

LITERATURE STUDIES

The literature studies provided an understanding of the city planning in DSM and the current situation of public space and green space in the city. This is a topic with limited research. We searched in the databases Google, Primo, Libris and ScienceDirect with the following keywords: public space, public areas, DSM, urban space, green space, green areas and open space. We mainly used the doctoral thesis *A Bronning Process: The case of Dar es Salaam City* by Othmar Simtali Mng'ong'o to outline the situation of green spaces in DSM. *Dar es Salaam Master Plan 2012-2032* by Dodi Moss, Buro Happold, Afri Arch and Q-consult and *Dar es Salaam Central Area Redevelopment Plan* by Ministry of Land and Human Settlements Development provided information of the city planning of DSM and CBD as well as future plans of public space and green space. We also used the book *Ecology, Planning and Management of Urban Forests International Perspectives* by Margaret Carreiro, Yong-Chang Song and Jianguo Wu (Chapter *Benefits of Urban Green Space for Improving Urban Climate* by Volker Heidt & Marco Neef) to argue for the benefits of green space in general. The article *The value of public space: how high quality parks and public spaces create economic, social and environmental value* by Commission for Architecture and the Built Environment (CABE) was used to argue for the benefits of public space in general.

SITE OBSERVATIONS

Site observations were conducted in order to gain an understanding

of what public spaces and green spaces exist in CBD and how people use them. We examined sites that we had gained information of during interviews, that we came across during transportation within CBD or that we had observed in maps. We observed both well-known sites but also more unknown sites. We selected different types of sites e.g. parks, streets, waterfronts, since we wanted to display a wide variety of existing public space and green space. A relevant site for observations had to be easy to access, open for public use and situated within the CBD.

We observed the following sites: Bustani ya Posta, Mnazi Mmoja, a pocket park along Samora Avenue, the streets Samora Avenue and Sokoine Drive, a green space close to Aga Khan Hospital, the Botanical Garden and Ocean Road. The green space close to Aga Khan Hospital, the Botanical Garden, Mnazi Mmoja and the pocket park were observed at one occasion and the remaining sites were observed at several occasions. All sites were observed during rainy season and during day time on weekdays, since the CBD is basically deserted on weekends particularly on Sundays. The site observations included making notes, photographing and sketching (figure 14).

Three main aspects were examined at each site: the design and structure, density of people and activities. Looking at the design and structure included examining the different elements of the space, location in the city, if it was an open or enclosed space, space organization, the formation of the landscape and vegetation. This was essential to understand how the site's physical structures and design is related to the number of visitors. Density of people meant noting how many people that were visiting the sites or just passing by, which provided an understanding which sites that were more or less popular. Activities meant observing movement patterns, type of users, what activities they engaged in and what elements in the design that were more or less popular. Observing activities was essential to understand the culture and how people pursue their everyday life routines and how they use the city. The tropical climate makes it even more important to observe people since many activities are taking place outdoors. We noted date, time, weather conditions and what type of space it is (public space, public green space or restricted green space). We also analyzed the sites. The analyses were developed into



Figure 14. Linn Nilsson is sketching at Forodhani Park, Zanzibar. Making sketches was useful during site observations.

learning experiences that were kept in mind when creating the design proposal for the project site.

SEMI-STRUCTURED INTERVIEWS

Interviews were vital in order to gain any information at all. Finding information in Tanzania is difficult since there is limited written information. Much information is passed on orally which means talking to people in person is beneficial.

Bernard (2006, p. 212) informs that a semi-structured interview is based on the use of an interview guide, which is a written list of questions and topics that need to be covered in a particular order. This demonstrates that you are prepared and in control of what you want from the interview but both you and the respondent are free to follow new leads. He argues that semi-structured interviews are best to use when you will not get the chance to interview someone more than once. The semi-structured interviews were beneficial since it gave us the chance to explore and develop a keen understanding of the topic and the cultural differences in order to develop relevant and meaningful questions.

A semi-structured interview at the second stage was performed with Camilius Lekule, professor in urban design at Ardhi University (ARU), in order to gain knowledge about the current situation of public space and green space in DSM and his opinions on how it should be developed in the future.

THIRD STAGE – KIVUKONI WATERFRONT

The third and final work stage was to examine the project site. This stage included following methodologies: literature studies, site observations, semi-structured interviews, mapping and analyzing and the design process.

LITERATURE STUDIES

Literature studies were performed to complement the information of Kivukoni gained from interviews and site observations. The book *Dar es Salaam: histories from an emerging African metropolis* by James R. Brennan, Andrew Burton and Yusuf Lawi provided information about the history of Kivukoni Waterfront. *Dar es Salaam Master Plan 2012-2032* by Dodi Moss, Buro Happold, Afri Arch and Q-consult and *Dar es Salaam Central Area Redevelopment Plan* by Ministry of Land and Human Settlements Development gave information about future plans for the waterfront.

SITE OBSERVATIONS

We conducted 17 site observations along Kivukoni Waterfront. The purpose was to understand the current physical prerequisites of the site and how people use it. To achieve this we inventoried the following aspects: architecture, vegetation, topography, microclimate, sounds, solid waste, private and public areas, movement patterns of pedestrians and motorized traffic, views, safety, activities, city elements and tide levels. This provided a foundation for the mapping and analyses of the waterfront. The site observations included making notes, sketching, photographing and measuring (figures 16 and 17). They were conducted frequently, during weekdays and weekends, from early morning to afternoon or evening. Every site visit was planned in order to decide which aspect had to be examined for the day. We only made two site visits during night time, since it was much more insecure after nightfall.



Figure 15. Notes on a schedule on the wall helped to create a structure for the interviews and site observations during the stay in DSM.



Figure 16. Inventorying the site and taking photographs was a large part of the work.



Figure 17. An architect at Epitome Architects named Innocent Mayenze guided and informed us about the site during our second site visit at Kivukoni.

SEMI-STRUCTURED INTERVIEWS

The interviews were divided into three categories. The first category is people or businesses that directly affect the project site, that is visitors of the waterfront and its surroundings as well as businesses established along the waterfront. The second

category is organizations that indirectly affect the project site or the outcome of the design proposal that is potential stakeholders, private companies and NGO: s. Finally the third category is professors and former students at ARU. The interview questions that have been most important to the outcome of the design proposal are found in Appendix: Interview questions.

For the first interview category, interviewing visitors of Kivukoni and employees at businesses established in the area was crucial to find out about their opinions, visions and ideas of the site in order to consider these in the design proposal. A protocol with standard questions was prepared depending on the person's occupation. Some interviews were performed spontaneously depending on which activities people engaged in. The standard questions were what they were doing at the project site and what their opinion of the site was. We noted the name, age and occupation of the interviewees. We interviewed the following groups of people: seven vendors along Kivukoni Road (figure 19), a taxi driver at Kivukoni ferry terminal, three children, seven boda boda taxi drivers and a business man along Kivukoni Road, three workers at Mama Lishe (figure 18), three people hanging out at the Kivukoni ferry terminal and two police men at the marine police. During these interviews we needed an interpreter, since most of the local people only speak Swahili. The interpreters were voluntary students from ARU.



Figure 18. Workers at Mama Lishe, a restaurant business established at the waterfront, was an important group of people to interview, since they work at the site and have observed the waterfront for several years.



Figure 19. Vendors along Kivukoni Road was another important group of people to interview in order to find out their opinions and visions for the waterfront.

For the second interview category, potential stakeholders, companies and NGO: s, each interview was prepared individually. During these interviews we did not need an interpreter. The following section presents what interviews we performed and why.

GOVERNMENTAL AGENCIES

Antiquities Division: Government institution responsible for conservation, preservation, protection and management of cultural heritage resources (Ministry of Natural Resources and Tourism n.d.).

Our objective: to gain an understanding of what cultural and historic buildings and environments that exist in the project site area that should be preserved.

Dar Rapid Transit Agency: the agency responsible for the implementation of the BRT system in DSM (DART 2014).

Our objective: to obtain reports and construction drawings of Kivukoni Road and the waterfront. Moreover, to gain information of the design of Kivukoni Road in order to better integrate it with the waterfront design. We also wanted to know if DART has plans to develop the waterfront and what their visions are.

Ilala Municipal Council: The municipality responsible for the physical planning and administration within Ilala district in which Kivukoni is situated.

Our objective: to gain information of their plans and visions for future development of the waterfront.

The Ministry of Lands, Housing and Human Settlements Development: the administrator of land and human settlement in Tanzania which provides various land related services (The Ministry of Lands, Housing and Human Settlements Development 2010).

Our objective: to obtain documents and maps and gaining information of the future plans for Kivukoni Waterfront as well as if there are certain laws that need to be addressed in the design proposal.

Tanzania Ports Authority: TPA is the owner of Dar es Salaam, Tanga and Mtwara Ports as well as all lake ports in Tanzania (TPA 2012).

Our objective: to find out if they are the owner of the waterfront and if they have plans to develop it.

NONGOVERNMENTAL AGENCIES

Nipe Fagio: "Nipe Fagio is a Tanzanian based public advocacy organisation, focused on increasing awareness, as well as facilitating and promoting sustainable development initiatives in Tanzania"(Nipe Fagio n.d.).

Our objective: to gain an understanding of how we should approach the issue of solid waste management (SWM) in the design proposal.

Tanzania Forest Conservation Group: the largest NGO in Tanzania focusing on conservation of natural forests (Tanzania Forest Conservation Group 2009).

Our objective: to gain an understanding of which trees and plants that work in coastal and urban environments that can be used in the design proposal.

PRIVATE ACTORS

Design Solutions: Anitha Urasa¹ informs that Design Solutions is a private company focusing on architecture, landscape architecture and interior design.

Our objective: to gain information about local trees, plants and materials that work in coastal and urban environments that can be used in the design proposal.

Epitome Architects: Epitome is an architectural firm established in 2007 located in the CBD (Epitome Architects 2011).

Our objective: to be introduced to Kivukoni Waterfront and help to establish contacts to interview at IMC.

Green Waste Pro Limited: Green Waste Pro Limited is a private company with the mission to keep the Ilala district clean in order to preserve the nature and environment (Green Waste Pro Limited 2012).

Our objective: to gain an understanding of how the solid waste is collected within the CBD and what guidelines regarding SWM need to be addressed in the design proposal.

Hyatt Regency Dar es Salaam, The Kilimanjaro: A recently renovated five-star hotel located along Kivukoni Road (Hyatt Regency Dar es Salaam, The Kilimanjaro n.d.).

Our objective: to gain information of the hotel owner's plans and visions for the waterfront.

Lutheran Church: a church built in 1901 by the Germans (Hoyle 2002, p. 119), situated along Kivukoni Road.

Our objective: to find out what activities the church is hosting to assess if they can be connected to the waterfront design.

WastePlan: a national on-site waste management company specialising in recycling and reducing waste to landfill (WastePlan n.d.)

Our objective: to gain information of the prospects for introducing recycling in the design proposal.

Finally, for the third interview category we interviewed Dr. Camilius Lekule, professor in urban design at ARU, in order to gain his opinion of how Kivukoni Waterfront should be developed and what functions and activities he consider as realistic to suggest. We also interviewed Caleb Kimaro and Anitha Urasa, former students at ARU that have made design proposals for Kivukoni Waterfront, to exchange ideas regarding the design and help formulate the research questions.

MAPPING AND ANALYZING

Mapping was important in order to analyze the existing structures and usage of the site and its surroundings. The mapping of the waterfront was quite extensive, mainly because it is a complex area and by mapping it becomes easier to analyze the information. Overlaying the maps helped us to see patterns and understand the site better. We mapped specific aspects that were selected carefully in order to address the most prominent issues of the site. The following aspects were mapped and are displayed in chapter six: architecture, vegetation, topography, microclimate, sounds, solid waste and private and public areas. Most of the information was based on site observations but also on semi-structured interviews and observations of maps on Google or AutoCAD drawings obtained by DART. These aspects were also evaluated in order to understand what to consider in the design proposal.

We conducted the following analyses which are displayed in chapter six: views, safety, activities (based on Gehl's theories) and city structure (based on Lynch's theories). The analyses were based on site observations and how we perceived the site but also on semi-structured interviews and literature studies. Parts of the mapping and analyzing started in DSM, but most of this work was conducted in Sweden.

Gehl (2010, p. 9-12) means there are three types of outdoor activities: necessary, optional and social:

Necessary: compulsory activities like going to work or school.

Optional: activities that people can engage in if they wish to do so, such as taking a walk or sunbathing.

Social: activities that depend on the presence of others in public spaces e.g. children at play, greetings and conversations.

Gehl (2010, p. 11) argues that when a public space has poor quality, only strictly necessary activities occur, and that optional and social activities increases with increasing quality of the public space. We practiced Gehl's theories to identify necessary, optional and social activities at the project site.

Lynch (1960, pp. 46-48) means that cities consist of five main elements; paths, edges, landmarks, nodes and districts:

Path: road, street, walkway, track or trail.

Edge: an element perceived as a border or barrier between areas.

Landmark: building or element with a strong identity, standing out from the crowd.

Node: a juncture where people change their mode of transport like bus terminals.

District: an area of a common character.

We practiced Lynch's theories in a modified version to identify distinctive city elements along the waterfront and its surroundings which provided an understanding of the city structure.

A SWOT analysis was carried out to summarize and highlight the key points of the mapped aspects and analyses of the site. A SWOT analysis is a tool for identifying internal strengths and weaknesses, and external opportunities and threats within an organization (Oxford University Press 2015b). In our project, the SWOT analysis identifies strengths, weaknesses, opportunities and threats of the waterfront.

DESIGN PROCESS

Testing and evaluating different ideas was vital in order to achieve an appropriate design language and site-specific design solutions. The design process was conducted in Sweden and included the methods sketching, brainstorming, formulating a design program and visualizing the design proposal. The SWOT analysis along with the key points from the first and second work stage were the foundation for development of the design program for the waterfront. We were sketching and brainstorming individually at first. The sketch sessions were followed by discussions of what ideas and which design language we wanted to apply to the site. Working in different scales helped to view the site from different perspectives, from city scale to local scale and detailed scale. A lot of time was consumed to finding out what kind of design languages and functions that would be appropriate for Kivukoni Waterfront. Once reaching the stage where we had a common vision of what we wanted to achieve with the design, we started sketching together at a more detailed scale. When the design proposal started to take form we visualized it by creating illustrations in following software: AutoCAD, Adobe Photoshop, Adobe Illustrator and Adobe Indesign.

¹Anitha K. Urasa, registered architect and landscape architect at Design Solutions, interview 10th of April 2014.

Discussion of methods

This discussion brings up the biggest challenges of the conducted methods. The combination of diverse methods has been the greatest strength throughout this project, but it has also been time consuming and generated an extensive master thesis.

LITERATURE STUDIES

The literature studies were helpful in terms of complementing the information that we did not gain through interviews and site observations. Nevertheless, finding information of the city planning in DSM as well as the project site was difficult at times. Due to the culture and tradition in Tanzania, much information is passed on orally hence there are few written documents. Poor file storage systems and databases pose a lack of soft-copies while hard-copies can be worn-out, missing pages or cannot be found.

SEMI-STRUCTURED INTERVIEWS

Interviews were time-consuming, requiring a lot of planning, preparation of questions, and scheduling of meetings. Language barriers and communication issues can have affected the gathering of information. During interviews with local people we were dependent on students at ARU to act as translators which can have resulted in loss of information or misinterpretations during the translation process, either due to how we formulated the questions or that we did not receive a word-for-word translation. However, there were no alternative methods to use considering the limited written information; hence the most efficient method to gain information was to perform interviews.

SITE OBSERVATIONS

The site observations were valuable to confirm the information that we had only read about or that someone had explained to us. However, many of the site observations can be improved in terms of the execution. For instance, we were not able to inventory certain areas due to security reasons. Because of this we were not able to inventory all the aspects that we had planned. Early in the project we were told by the marine police that the beach area was not safe for us and that we were not allowed to walk along the beach. This meant that we were not able to inventory the beach area properly. For instance, we were not able to inventory the levels of the tide, which meant we had to make estimations based on observations from a distance and observations of maps and photographs. This has affected the design proposal, when it comes to the exact measurements and the heights. However, we made the statement early on that the design proposal is at a conceptual and vision based level, rather than exact solutions and measurements, and that our estimations of the tide level is proficient enough. The topography was another aspect difficult to inventory, considering the project site is a large scale area, and most parts are inaccessible. For this reason, we utilized the height data in the AutoCAD drawing obtained from DART. Since we did not gain any other height data to make comparisons, we do not know how precise this data is. However, considering that DART recently utilized this height data for the construction of Kivukoni Road, we assessed that the data is accurate enough for

the development of a conceptual design proposal.

We did not use a certain checklist or framework during the site observations. It was beneficial in terms of being able to observe the aspects of the site that we considered as the most prominent, but it might also have resulted in missing certain aspects.

GENERAL CHALLENGES

Cultural differences have influenced the gathering of information in several aspects. The fact that we were two Swedish girls being foreigners to the culture and to the way people act can have limited or guided our understanding of the project site and of the aspects that we prioritized. As foreigners and white persons, referred to as “mzungu”, we stood out and caught attention everywhere. It was common that poor and homeless people approached us during site observations out of curiosity, which often only entailed interesting conversations and interaction that fortified the project, but at times it made us feel uncomfortable making notes, sketching and photographing. Therefore, observing the everyday life in public spaces and green spaces was influenced by the interaction that inevitably occurs. During interviews with local authorities, private companies, NGO’s and users of the site we were met by both expectations and skepticism of what we could accomplish through our project. Photographing could sometimes be sensitive due to cultural beliefs or certain businesses, for instance we were not allowed to take photographs of the marine police area. Another challenge of the Tanzanian culture is that people have a more relaxed attitude in terms of the time aspect which entailed situations where people sometimes were late, difficult to reach, or cancelled or forgotten meetings. This was time consuming and somewhat frustrating, but taught us both to have patience with people and to be persistent.

The limited time of the field studies in DSM was a challenge. Visiting a developing country was a completely new experience for both of us, and it took time to adapt to the new community, the culture and the everyday life routines. The new impressions sometimes made us feel overwhelmed and it was difficult to always keep a clear focus and knowing what tasks to prioritize. The fact that the time in DSM was limited meant we would not have the chance to go back and conduct complementary inventories of the project site. This affected our field studies. We became keen on gaining as much information as possible, hence not sifting the information enough.

3

WATERFRONT INSPIRATIONS

HOW TO CREATE A WELL-DESIGNED WATERFRONT

Chapter three introduces the topic of waterfronts. It starts by outlining how waterfronts have emerged in cities and how the land use of waterfronts has changed through time. Furthermore, it describes what benefits cities can gain by transforming their waterfronts into public space. The next section presents guidelines that direct the design of public waterfronts which have been applied to the design proposal of Kivukoni Waterfront. Finally, the reference projects of Boat Quay, Kuching Waterfront and Forodhani Park are presented, which have been essential inspiration sources in the latter design proposal.

Waterfronts: where the city meets the water

Some of the most well-visited and famous cities in the world, such as Hamburg, Sydney, Cape Town and New York, are located close to water and what they have in common are spaces called waterfronts as shown in figures 20, 21 and 22 (Breen and Rigby, 1996, p. 11). Pekin Timur (2013, p. 170) enlightens that the visual, audial, tactual and psychological effects the water has on people makes it an important part of the urban environment. Cities that are located close to water can take advantage of the water's benefits to create public spaces.

THE EMERGENCE OF WATERFRONTS

Breen and Rigby (1996, p. 11) illuminate that many of the world's cities were founded in areas located close to water and it was from here the cities began their development. These areas were to become the strategic location of factories and industrial facilities. Smith and Garcia Ferrari (2012, p. Xiii) inform that communication with other cities and towns were strongly connected to the gateways that were created by the traditional harbors and ports. This is also the case of DSM which emerged by establishing an area for harbor and port related activities. Mpetula² informs that Kivukoni Waterfront is an old harbor area that in the past was mainly used by fishermen and to transport people and goods by boat to other islands and cities.

According to Smith and Garcia Ferrari (2012, p. Xiii) the transformation of waterfronts has occurred through centuries when cities have grown, developed and been rebuilt. Breen and Rigby (1996, p. 12) describe that the transformation of waterfronts in general was going to start for real after World War 2, when the location for industries, transportation facilities and ports were continuously moved to less central areas in cities. The relocation of these land uses resulted in open spaces within cities, among others along waterfronts, which could be developed for new uses. Desfor et al (2011, p. 3) argue that the remaining open spaces should be developed first in order to densify cities instead of developing unexploited landscape in the outskirts of the city.

THE BENEFITS OF TRANSFORMING WATERFRONTS INTO PUBLIC SPACE

Desfor et al (2011, p. 2) state that planners and developers around the world consider waterfronts as areas that are possible to invest in, because of their potential to benefit the economy and to develop social and cultural values. By implementing waterfront projects, former dislocated and/or unutilized areas, known as "problem spaces", in the central city can be transformed into public spaces that provide opportunity for social interaction and for the city itself to gain an identity in a global aspect. Breen and Rigby (1996, p. 9) inform that by using the water's attraction power for making people get together at public spaces, segregation in the cities can be reduced.

Desfor et al. (2011, p. 3) mean that transformation of waterfronts into public spaces will be a continuous process in future city development. The development of public waterfronts is the greatest example in present time of the ability of cities

worldwide to transform and adapt themselves in order to adjust to altered conditions due to the current needs of the citizens (Breen and Rigby 1996, p. 11).

To reawaken and give waterfronts a sense of importance, it is not enough to build new buildings or to refurbish old ones (Smith and Garcia Ferrari 2012, p. Xiv). The perspective needs to be wider; for instance looking at the community and re-establish links between the waterfront and the adjacent urban areas. This requires a more ingoing planning process that includes for example participation of the citizens.

A well-designed public waterfront generates several positive effects, such as improving the economy of the city as well as improving its self-image (Breen and Rigby 1996, p. 11). Breen and Rigby (1996, p. 137) predict that future land use of urban waterfronts will be public spaces that offer possibilities for recreation.



Figure 20. The Victoria & Alfred Waterfront, Cape Town. People are relaxing, socializing, eating ice cream and walking along the Atlantic Ocean. Photo: © "South Africa - Cape Town Waterfront" by Diriyee Amey, (CC BY 2.0)



Figure 21. Transforming old port areas into public spaces in Hamburg means people can come close to the river Elbe. Photo: © "Hafencity" by Michael, (CC BY-ND 2.0)



Figure 22. People walking along the ocean in Sydney. Photo: © "Sydney Foreshores" by Colleen Galvin, (CC BY 2.0)

KEY POINTS OF WATERFRONTS

- By implementing waterfront projects, former dislocated and/or unutilized areas in the central city can be transformed into public spaces.
- The transformation of waterfronts into public space generates several positive effects, such as benefitting the city's economy and providing social and cultural values that improve the city's self-image hence giving it the opportunity to gain an identity in a global aspect.

Waterfront guidelines

To understand what makes a well-visited and vibrant waterfront and what to consider in the design proposal for Kivukoni Waterfront, we evaluated guidelines that direct the design of waterfronts. The guidelines have been developed by the nonprofit planning, design and educational organization PPS (PPS n.d.c). PPS (n.d.c) has worked with different kind of public spaces for over 30 years, including waterfronts, in a desire to help people create and detain public spaces as major assets of the city.

PPS (n.d.b) has developed 13 guidelines that can serve as a framework to generate waterfront projects into vibrant public spaces in the document *How to Transform a Waterfront*. Furthermore, PPS has developed 10 qualities that they believe a great waterfront should have in the document *10 Qualities of a Great Waterfront Destination* (PPS n.d.a). We evaluated the guidelines and qualities and selected those that we consider as important and that can be applied to Kivukoni Waterfront. The guidelines and qualities that are similar were merged together. The selection process generated 16 guidelines. We used them as a foundation for our design program and concept of the design proposal for Kivukoni Waterfront. We divided the guidelines into six categories: Community vision, Buildings, Accessibility, Context, Design principles and Activities and functions.

²Hellenic AG Mpetula, urban planner at Ministry of Land and Human Settlements Development, interview 15th of April 2014.

COMMUNITY VISION

The following guidelines include visions of the community and citizen participation.

MAKE PUBLIC GOALS THE PRIMARY OBJECTIVE

The waterfront should be treated as a public asset only; public goals always have to be the first priority (PPS n.d.b).

CREATE A SHARED COMMUNITY-VISION FOR THE WATERFRONT

It is important to invite the community and the citizens to express their opinions about the waterfront vision (PPS n.d.b).

ENSURE THAT NEW DEVELOPMENT FITS WITHIN THE COMMUNITY'S VISION

New developments should meet the community's shared vision for the waterfront. The new development should never interfere with pedestrian connections hence excluding parking lots and auto-oriented development (PPS n.d.b).

GOOD MANAGEMENT MAINTAINS COMMUNITY VISION

Keeping the waterfront in a well-maintained condition is essential to make it stay aesthetically appealing and frequently visited as well as to prevent it from declining (PPS n.d.a).

ACCESSIBILITY

The following guidelines address the accessibility of the waterfront.

OPTIMIZE PUBLIC ACCESS

The most visited waterfronts are the ones with continuous public access. People should also be able to access and interact with the water. If it is not possible to touch the water, people should have other water elements adjacent, for instance a fountain (PPS n.d.b).

SUPPORT MULTIPLE MODES OF TRANSPORTATION AND LIMIT VEHICULAR ACCESS

To enhance the use of waterfronts, they should be possible to access by other means than private vehicles. It is crucial to encourage pedestrian and bicycle accommodation as well as access by boat. By limiting vehicular access and parking lots people can use the waterfront to its full potential (PPS n.d.b).

BUILDINGS

The following guidelines include what to consider regarding the function and use of buildings on the waterfront.

DESIGN AND PROGRAM BUILDINGS TO ENGAGE THE PUBLIC SPACE

Buildings on the waterfront should be connected to the public space. The activities in the ground floors of the buildings should create an interaction with the outdoor activities (PPS n.d.b).

MAKE STAND-ALONE ICONIC BUILDINGS SERVE MULTIPLE FUNCTIONS

Iconic buildings that stands out and can be perceived as landmarks should host a broad variety of activities and functions. They should strive to be flexible and benefit the public crowd (PPS n.d.b).

ENCOURAGE 24-HOUR ACTIVITY BY LIMITING RESIDENTIAL DEVELOPMENT

A high concentration of residential buildings along the waterfront inhibits the diversity of the waterfront use, and should therefore be limited. Waterfronts are places where festivals, markets and nighttime activities should take place. As a conclusion, it is important to encourage 24 hour activity (PPS n.d.b).

CONTEXT

The following guidelines include what to consider regarding the waterfront's context.

LOCAL IDENTITY IS SHOWCASED

Well-visited and well-designed waterfronts are found in cities that adapt and turn themselves to the water and embrace the local identity, history and culture. This generates a unique sense of place and interest in the waterfront. The opportunity to experience local art, music and theatre draws people to the area and its surroundings (PPS n.d.a).

THE WATER ITSELF DRAWS ATTENTION

A waterfront's greatest asset is the water itself, which should be the centerpiece of the design and activities. This means proposing for instance boat tours, water-taxis, fishing, restaurants or bars on anchored boats, water sports and swimming (PPS n.d.a).

DESIGN PRINCIPLES

The following guidelines include how the design and structure of the waterfront should be managed.

CREATE MULTIPLE DESTINATIONS

This guideline means creating destinations along the waterfront. When the destinations have been identified, people involved can begin to define the activities and functions each destination should have. Each destination should offer different activities and functions to promote a mixed use hence attracting different target groups (PPS n.d.b).

CONNECT THE DESTINATIONS

The destinations have to be connected, and should create a vision for the waterfront as a whole. The waterfront design should strive to achieve continuity, especially regarding the pedestrian experience (PPS n.d.b).

FLEXIBLE DESIGN FOSTERS ADAPTABILITY

The waterfront design has to be flexible. Being adaptable to changes that attract different target groups at different times creates a well-visited waterfront (PPS n.d.a).

ACTIVITIES AND FUNCTIONS

The following guidelines include address activities and functions of the waterfront.

ACTIVITIES GO ON ROUND-THE-CLOCK AND THROUGHOUT THE YEAR

It is vital to plan waterfront activities for all seasons, 24 hours of the day. Creative and smart planning will prevent the waterfront from being an empty space just because of bad weather or when darkness occurs (PPS n.d.a).

CREATIVE AMENITIES BOOST EVERYONE'S ENJOYMENT

This guideline indicates that a well-designed and well-visited waterfront offers amenities that increase people's comfort and enjoyment as well as encourages social interaction. It can be either temporary or permanent amenities, like seats at the right places, garbage bins, lighting, public art and so on (PPS n.d.a).

Reference Projects

The following sections present three reference projects: Boat Quay in Singapore, Kuching Waterfront in Malaysia and Forodhani Park in Zanzibar. Their design, functions and activities are outlined and they are also analyzed in terms of what design features that can be applied to Kivukoni Waterfront.

BOAT QUAY, SINGAPORE

Boat Quay is located along the Singapore River in Singapore (Breen & Rigby 1996, p. 122). According to Breen & Rigby (1996, pp. 122-124) the development of the waterfront included managing former problems of pollution and waste and relocation of squat settlements. Boat Quay was transformed into a landscaped promenade with shops, bars and restaurants that line the lower reach of the Singapore River. Breen & Rigby (1996, p. 125) inform that the cafes and restaurants at the river's edge provide outdoor dining. The shop houses could easily have been replaced by new office towers, but to preserve the history of Singapore and promote the tourism, they were restored by private owners as shown in figure 24 (Breen & Rigby 1996, pp. 122-124). According to Breen and Rigby (1996, p. 125) the restored historic shop houses feature a variety of architectural styles, which create diverse characters along the promenade. The authors enlighten that the area is now a vibrant meeting place both day and night, and is visited both by tourists and local people. During night the waterfront turns into a colorful site with the lighting being reflected in the Singapore River (figure 25).

ANALYSIS

Boat Quay is a popular meeting place which attracts different target groups; local visitors, tourists and working people. The area has several cafes, bars and restaurants that are well-visited both during day and night which promote safety. The commercial businesses help to attract people to the waterfront as well as connecting it to the commercial businesses in the city center (figure 24). The restored shop houses help to preserve the history and promote tourism. The outdoor dining which is located next to the river's edge provides people with a close connection to the water. Steps facing the water help to connect the waterfront and the river and also provide seat opportunities (figure 23). In order to create a well-designed waterfront, former issues like existing squat settlements usually have to be managed.

WHAT DESIGN FEATURES CAN BE APPLIED TO KIVUKONI WATERFRONT

- Functions and activities that attract people frequently both day and night promote safety.
- Commercial businesses help to attract people to the waterfront and connecting it to the city center.
- Highlighting historic buildings help to preserve the history of the site and promote tourism.
- Design features such as steps facing the water and outdoor dinings at the river's edge help to connect the waterfront with the water.
- Relocation of existing squat settlements or other facilities can be necessary when developing a public waterfront.



Figure 23. Steps by the water at Boat Quay provide attractive seats and a close contact to the water. Photo: © "Boat Quay" by B_cool, (CC BY 2.0)



Figure 24. The restored shophouses preserve the history of Singapore and promote tourism. Commercial activities such as restaurants and cafes established along the waterfront help to attract visitors. Photo: © "Singapore ~ River at Boat Quay" by VasekaPhotography, (CC BY 2.0)



Figure 25. Well illuminated. Boat Quay is well visited even during the evening, since some commercial businesses are still open. Photo: © "Boat Quay, Singapore -panorama-20Dec2009" by Gordon Wrigley, (CC BY 2.0)

KUCHING WATERFRONT, MALAYSIA

Kuching Waterfront is located along the Sarawak River in Malaysia (Breen & Rigby 1996, p. 148). Breen and Rigby (1996, p. 148) enlighten that Kuching Waterfront was formerly a deteriorated and neglected area with squalid living conditions. In 1993 the waterfront had been transformed into an attractive new promenade and public space. The waterfront has an overall organic design which follows the shape of the river. Its main features include a new river wall; a wide, shaded promenade; a waterfront park; cantilevered belvederes over the river and restored historic buildings (Breen & Rigby 1996, p. 150). The waterfront has numerous attractions such as a Town square, tourist information, café, kiosks, a Chinese History Museum, a Market/Restaurant Exhibition Centre, a playground, several pontoons, fountains and artworks. It has a 7 meters wide promenade along the river, with a row of shading trees along it. Breen & Rigby (1996, pp. 150) inform that there are several view platforms along the promenade, which provide an overview of the waterfront and the river. Different mosaic patterns in the paving, designs on the river-wall balustrade and pavilions are based on traditional Chinese motifs (figure 29). The paving, artworks, decorations and promenade wall feature the rich cultural heritage of Borneo. Breen & Rigby (1996, p. 151) inform that the centerpiece is the Town Square which is flanked by fountains and has become the favorite gathering point for local people as well as tourists. The planners have also connected the waterfront to the city, physically as well as symbolically, by re-establishing vistas and visible connections to the city center.

ANALYSIS

The planners have worked a lot with intertwining the waterfront and the river. Elements that connect the waterfront and the river are for instance boat trips (figure 26), cantilevered belvederes, viewing platforms, steps facing the water and a wide promenade along the river. The waterfront is no longer a barrier between the city and river. The design enhances the history of the site and the island's rich cultural heritage. The planners have also connected the waterfront to the city center through visible connections. The wide promenade stretches along the entire waterfront and creates continuity (figure 27). Large trees along the promenade provide shade, which is a necessity in the hot climate. The waterfront design is a combination of buildings, green areas and open paved spaces such as a town square where events can take place. The buildings host multiple functions and activities, and provide refreshments and shelter. The waterfront attracts different target groups by providing mixed functions and activities.

WHAT DESIGN FEATURES CAN BE APPLIED TO KIVUKONI WATERFRONT

- Design features and activities such as boat trips, cantilevered belvederes, viewing platforms and steps facing the water help to connect the waterfront and the water.
- The historic and cultural heritage of the waterfront can be enhanced by using motifs that are traditional or characteristic for the city and country.
- Visible connections to the city center connect the waterfront to the city.
- A promenade extended along the entire waterfront creates continuity.
- A shaded promenade is a necessity considering the hot climate.
- Mixed functions and activities attract different target groups.



Figure 26. Kuching Waterfront has several docks for small boats. The boat trips make it possible for visitors to experience the river and view the waterfront from another perspective. Photo: © "Waterfront area, Kuching, Malaysia" by Shoestring, (CC BY-SA 4.0)



Figure 27. A walkway extended along the entire river creates continuity and connects the waterfront to the river. Photo: © "Kuching waterfront" by Joshua Eckert, (CC BY 2.0)



Figure 28. The Kuching Waterfront has space where markets can take place, like this food market. Photo: © "Weekend Market in Kuching, Sarawak, Borneo, Malaysia" by Illusive, (CC BY-SA 3.0)



Figure 29. A pavilion with traditional Chinese motifs enhances the history of the site and features a Chinese character. Photo: © "On the Waterfront" by Travelust, (CC BY 2.0)

FORODHANI PARK, ZANZIBAR

Situated on the beautiful shores of the Indian Ocean in Stone Town, Zanzibar, Forodhani Park is a popular meeting place for local people as well as tourists. Aga Khan Trust for Culture (2009, pp. 1-2) informs that the park was restored in 2009 and was part of a program for comprehensive seafront rehabilitation in Stone Town. The restoration included improvements of the walkways, the seawall, infrastructure and landscape, lighting, sewerage and drainage. It also included improving the conditions for vendors, upgrading of civic amenities and promotion of related socio-economic development. We observed the park at four occasions; two mornings, one afternoon and one evening during the weekend and a Monday.

THE DESIGN

The illustration plan (figure 30) shows that the park is divided into three distinct parts. The south part of the park is a playing area, enclosed by benches, plantings and Frangipani trees (figure 34). The ground material consists of rubber asphalt. The playing area has several play units, like rocking horses, a slide, climbing net and so on. Public toilets are situated south of the playground, with plantings in front of the entrance. The central part of the park consists of a green area of lawns, walkways, large shading trees and a pavilion in the center. A sign shows that it is not allowed to sit on the grass. The north part of the park is an open paved area with a fountain in the middle, enclosed by some hedges and smaller palm trees. Forodhani Park has three walkways; two that stretches through the park, and one along the ocean. There is a small kiosk along the walkway by the ocean, and a restaurant is protruding into the ocean.

A sea wall separates the park from the sea (figure 31). We estimated that the sea wall is about 3-4 meters above the shore level. When the tide is low parts of the shore is visible. There are steps at some places which make it possible to access the shore. According to the water marks on the sea wall, it seems that during high tide the water comes about one meter up on the sea wall. We estimated that the sea wall is about 40-45 centimeters above the walkway, which creates an informal seat.

All of the furniture, except some chairs by the kiosks, are permanent. The park has historic monuments including canons and a pavilion (figure 32). Most benches have organic shapes and are located next to vegetation; lawns, plantings or hedges. The majority of the seats are shaded, either by trees or umbrellas. The plants provide different values; decorative flowers, leaves or a special growth habit which create dynamic plantings (figure 33).

ACTIVITIES AND FUNCTIONS

The park hosts numerous functions and activities. There are several places to sit, both formal like benches as well as informal like the sea wall. During the day people were relaxing, buying something to eat or drink at the kiosk or visiting the restaurant. Children were playing at the playground. Some people were just passing by while others were sitting, talking, reading books, sleeping, swimming, going on boat trips and looking at the ocean and harbor view. Local people were gathered at a stair at the sea wall during sunset around 5 pm (figure 35). They were jumping into the water and swimming while others were observing. During the evening vendors were selling different kind of food and drinks at the open paved area by the fountain (figure 36). A lot of people were gathered at the food market to taste food and drinks, relax and socialize. Lighting poles lit up the area, but the vendors also had their own lamps.



Figure 31. A wall separates the park from the sea. There are steps at several places along the wall which make it possible to access the shore when the tide is low.



Figure 32. The pavilion is one of the historic monuments at Forodhani Park.



Figure 33. The plants provide different values such as decorative flowers and leaves or a characteristic growth habit, which create dynamic plantings.



Figure 34. The playground is enclosed by benches, plants and Frangipani trees, creating a lush environment.



Figure 30. Illustration plan of Forodhani Park, Zanzibar. The illustration plan is not up-to-date which means some details in the design are different today. However, the overall structure of the park is very similar to the current structure. The park consists of three distinct parts: a square shaped playground (south part), a green area of lawns and large shading trees with a pavilion in the center (central part) and a more open area of pavement with a fountain in the center (north part). Illustration: © Sasaki Associates/ Aga Khan Trust for Culture.

ANALYSIS

The overall impression of the park is a lush and well-maintained environment. The lawns are not allowed to sit on but provide aesthetic values and areas of low vegetation that are easy to overview hence promoting safety. Several walkways make it easy to move through the park and along the water. The shaded walkway creates a cool and lush environment to walk in, while the walkway by the ocean opens up the park which creates attractive views towards the ocean and harbor. The restaurant that protrudes into the ocean creates the opportunity to be in a place that is surrounded by the water, which generates a palpable water contact hence connecting the park and the ocean. The playing area is enclosed by plantings and trees, which creates a lush and shaded environment. However, the playground was overcrowded; it could have been larger. Since the playground is for smaller children only, the park is missing a place specifically designed for youths. The open paved areas are useful for larger events, like the food market during the evening. The food market was a popular event among both local people and tourists. It had a relaxing and nice atmosphere. Vendors were service-minded and quite well educated.

The sea wall generates a robust design and minimizes the height differences in the park. Minimal height differences means the park is easy to access and overview which promotes safety. Even though the sea wall is quite high, there is a close connection to the sea since it is possible to sit on the sea wall and hear the sound of waves and feel the sea breeze. Only local people used the steps to access the shore. It did not feel safe to go down there as a tourist.

All furniture e.g. benches, umbrellas, garbage bins and historic monuments are permanent (except some chairs by the kiosks), which creates a resilient and robust design that better withstands vandalism. There are lots of seats, both in the sun and in the

shade. The benches that are located next to vegetation create nice seat environments. The sea wall creates an informal seat and is popular, especially during the food market. Different design features provide the park with shade; buildings (like the pavilion), large trees and umbrellas, which is crucial in the hot climate.

WHAT DESIGN FEATURES CAN BE APPLIED TO KIVUKONI WATERFRONT

- Lawns provide aesthetic values and areas of low vegetation that are easy to overview hence promoting safety.
- Shaded walkways create cool and lush environments to walk in.
- Walkways along the ocean open up the waterfront towards the ocean which creates attractive views.
- Elements that protrude into the ocean create a palpable water contact hence connecting the waterfront and the ocean.
- Playgrounds should have a lush and shaded environment, and provide plenty of space for both children and parents.
- Open paved areas are useful for larger events, like food markets.
- A sea wall generates a robust design and minimizes the height differences of the waterfront.
- Minimal height differences make the waterfront easy to access and overview which promotes safety.
- Permanent furniture creates a resilient and robust design that better withstands vandalism.
- Shade can be provided by different design features; trees, buildings, roofs and umbrellas.



Figure 35. A group of local people were gathered along the sea wall to pursue swimming activities.



Figure 36. The food market is a popular event among both local people and tourists. Vendors are selling different food and drinks of Tanzanian traditions.



Figure 37. Forodhani Park (within the orange line) is situated close to the harbor in Stone Town, Zanzibar. Boats are passing by frequently. Photo: © "Zanzibar Panorama" by Muhammad Mabdi Karim, (GFDL-1.2)

4

BACKGROUND ON THE EAST COAST OF AFRICA

Chapter four addresses the background information concerning the characteristics and issues of Tanzania, DSM and the CBD that affect the project site, directly as well as indirectly.

Tanzania – a diverse country

It is believed that there have been people in the area where Tanzania is situated today farther back in time than anywhere else on earth (SIDA 2015). Here archeologists have found the remains of an early human species, Australopithecus afarensis, which lived three to four million years ago.

Today, there are approximately 50.8 million people living in Tanzania (Countrymeters 2015). The country is situated just south of the equator on the east coast of Africa and borders to eight countries and the Indian Ocean, as shown in figure 39 (Nationalencyklopedin 2014). SIDA (2015) informs that the country consists of the Mainland and the self-governmental islands of Zanzibar (figure 39). Moreover, Tanzania is the home of the Mount Kilimanjaro, famous national parks and nature conservation areas. Despite the unique nature resources within the country, the majority of the population suffers from poverty (figure 38).

URBANIZATION

A rapid development and massive population growth has occurred over the past ten years in urban centers of Tanzania (UN-HABITAT 2009, p. 20). The rapid urban population growth is posed by high natural births and rural-urban migration (UN-HABITAT 2010c, p. 2). According to The World Bank (2002, p. 6), investment in public and private sector has not been able to meet the demands of the increasing urban populations. This causes inadequate infrastructure and a lack of urban services, which poses issues like degradation of the urban environment and urban poverty. As a result, the national economic growth and productivity is inhibited. Many rural dwellers migrate to Tanzania's largest city, DSM, and other cities in the search of employment, education as well as subsidized or free public goods and services. The World Bank (2002, p. 7) informs that urban growth is often resulting in expansion of informal settlements, which often lack basic infrastructure.

POLITICAL SITUATION

According to SIDA (2015) Tanzania has a large ethnic diversity with about 120 ethnic groups. Despite of this, Tanzania is among the most stable and secure countries in sub-Saharan Africa. This has to do with the fact that the distribution of the number of people within the groups is quite even, which means no group can dominate over the others hence avoiding internal conflicts.

LANDSCAPE AND CLIMATE

Nationalencyklopedin (2015b) informs that the country has an extraordinary landscape with a distinct relief; the highest mountain of Africa, Kilimanjaro (5895 meters above sea level), and the second deepest (1 435 meters) lake on earth, the lake of Tanganyika. Most parts of Tanzania consist of plains and plateaus. The coastal plain extends to the Indian Ocean with coral outside, including Zanzibar and Pemba. The country is well visited because of its national parks and nature conservation areas (figure 38).

Nationalencyklopedin (2015b) informs that Tanzania has a tropical savanna climate and steppe climate on the high plateaus. The temperature varies very little during the year, but daily variations are considerably larger. DSM on the coast has an annual average temperature of 26 degrees Celsius. In the north there are two rain periods; March-May and October-December. The south part of the country has one rain period during December-April.

Tanzania has a very rich flora and fauna with the highest biodiversity in Africa (Nationalencyklopedin 2015b). 75 percent of the trees are deciduous, and only 2-3 percent are coniferous.



Figure 38. Ngorongoro Conservation Area. Despite the unique nature resources in Tanzania, a majority of the population suffers from poverty.

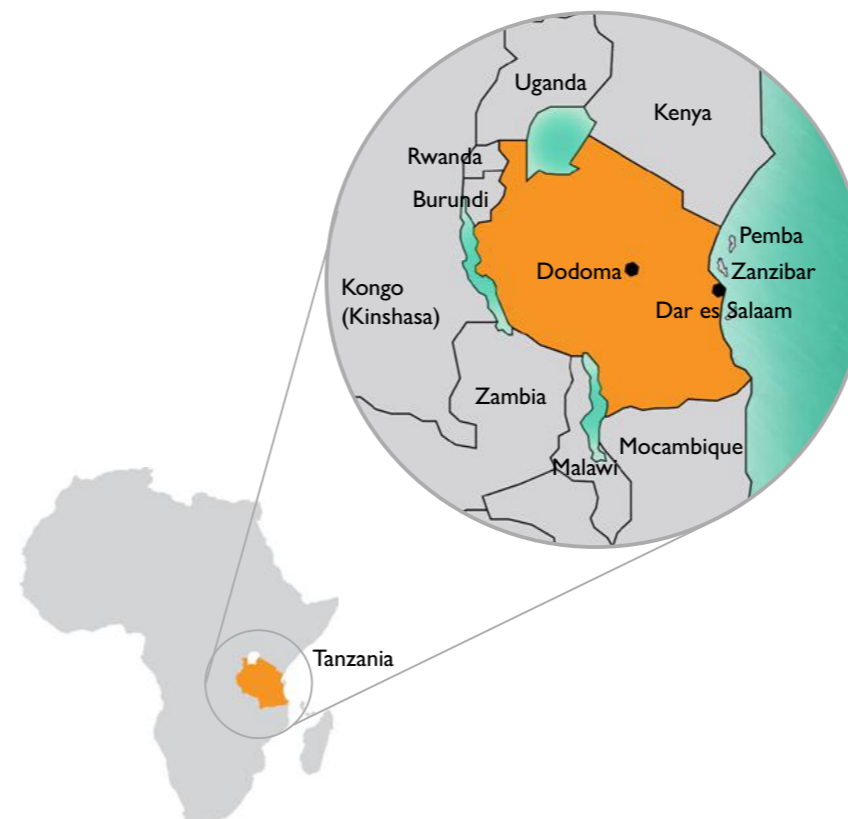


Figure 39. Tanzania is situated on the east coast of Africa and borders to eight countries and the Indian Ocean.

Tanzania

Form of government	Republic
Land area	945 090 km ²
Population	50,6 million in 2014
Capital	Dodoma
Language	Swahili (Kiswahili), English
Currency	Tanzanian shillings (TZS)
BNP per capita	610 US dollar in 2012
Religion	40 % Christians, 40 % Muslims. Smaller groups belong to traditional indigenous African religions.
Life expectancy	58 years
Most important export	Gold and other minerals, industrial products, tobacco coffee, cotton, cashew nuts, tea, spices.
Literacy	73,2 % in 2010

Figure 40. Information about Tanzania. Sources: SIDA (2014) and Nationalencyklopedin (2015b).

Dar es Salaam – the formal and informal city

Located on the shores of the Indian Ocean, DSM has beautiful coastal environments and marine resources which through development have the potential to make the city highly attractive. However, today's reality is very different. The following section provides insight in what challenges the city is facing and how they affect the project site.

HISTORY – THREE ERAS: ARAB, GERMAN AND BRITISH

DSM is a fairly young city and its origin can be described as follows:

“Dar es Salaam was established in 1862 as a port and trading centre to support new caravan routes opening into the interior of Africa” (UN-HABITAT 2009, p. 6).

Brennan, Burton and Lawi (2007, p. 16) illuminate that “the town's name, likely contracted from the Arabic for ‘Harbour of Peace’ (*bandar-as-salâm*), reflects not only the town's most striking feature, its large natural harbor, but also its aspiring status as a place of refuge for Sultan Majid from the growing pressures of courtly and diplomatic politics in Zanzibar”. The city was founded in 1862 by the Sultan of Zanzibar. The Sultan wished to create a town supported by plantation agriculture and long distance caravan trade.

Smiley (2009, pp. 180-181) informs that the German rule started in 1887. During this time DSM was divided into three zones. The central zone included administrative buildings and residences, the following zone was an area of Arab farms and the outermost zone contained African villages. Buildings facing the harbor were to serve Europeans only and were built in European style. The British officially started planning, development and segregation of DSM in 1923 (Smiley 2009, pp. 183-184). The British continued to pursue a planning approach characterized by three zones, which separated DSM physically as well as socially. Segregation is still present today, which extends beyond residence location and affects all aspects of everyday life such as shopping and recreation (Smiley 2013, p. 215).

DSM has emerged from the area where Kivukoni is situated today, and has since then grown from there (figure 42). Hence some of the buildings along Kivukoni Road are the oldest in DSM, which means the surroundings of the project site are featured by a unique cultural heritage.

DSM became the capital city in 1891, acquired municipal status in 1949 and achieved city status in 1961 (UN-HABITAT 2009, p. 6). In 1974 Dodoma became the new official capital (Nationalencyklopedin 2014).

Dar es Salaam	
Land area	1590 km ²
Population	4.3 million in 2012
Population growth	nearly 5 percent/year
Founded	1862

Figure 41. Information about DSM. Sources: Wikipedia (2015b), UN-HABITAT (2010a, p. 21) and UN-HABITAT (2009, p. 6).

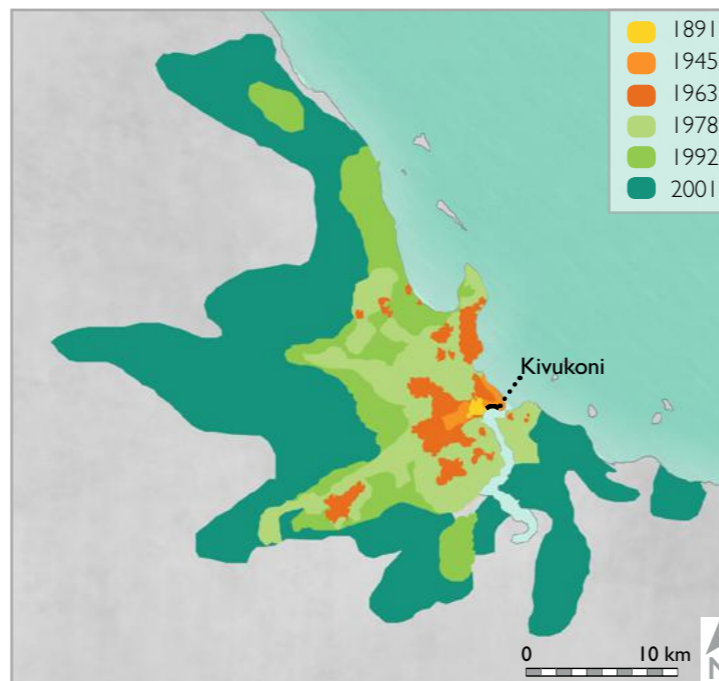


Figure 42. The settlement growth of DSM from 1891 to 2001. The city has grown from the area where Kivukoni Waterfront is situated, which means that some of the oldest buildings and city structures of DSM are found around Kivukoni. Map based on: Kironde, 1994; SDP, 1998; MLHSD, 2000 in Lupala 2002, pp. 34-35.

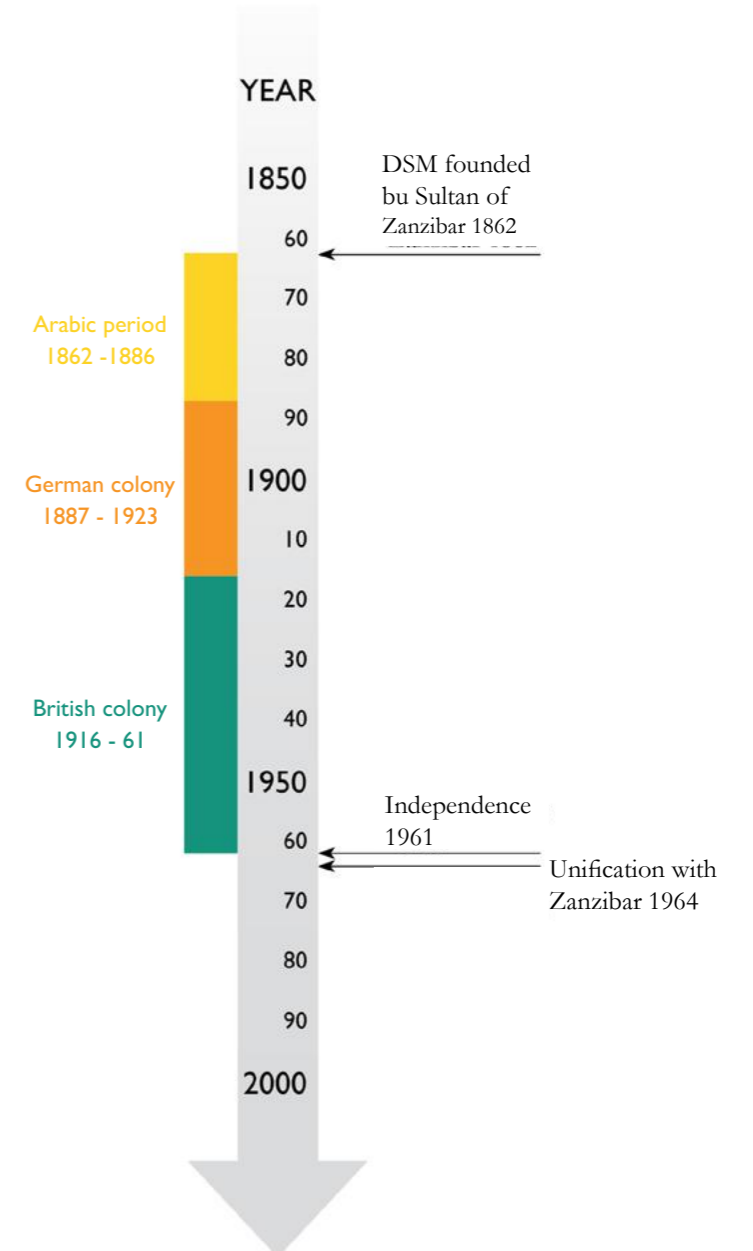


Figure 43. Historic timeline showing the development of DSM from 1862 onwards. The city has been influenced by three eras: Arabic, German and British. Source: Wikipedia (2015b).

ADMINISTRATION

Nationalencyklopedin (2015a) informs that DSM is Tanzania's largest city and economic center. The city has a population of 3.4 million people. Furthermore, the official capital city of Tanzania is Dodoma, but large parts of the country's administration are taking place in DSM. Being located in the eastern part of the country, on the shores of the Indian Ocean, DSM has the biggest port in Tanzania.

UN-HABITAT (2010a, pp. 48-49) informs that DSM has an administrative structure of local governance, which consists of the DCC and three municipalities: Ilala, Kinondoni and Temeke (figure 44). DCC is responsible for coordinating the work of the three municipalities as well as overall issues like roads, transportation, waste management and markets. Administratively, the CBD and Kivukoni Waterfront fall under the jurisdiction of IMC, which means this municipality is responsible for any decisions regarding future development of the project site (figure 44).



Figure 44. DSM has three municipalities: Kinondoni, Ilala and Temeke. Kivukoni is situated within Ilala, which means this municipality is responsible for any decisions regarding future development of the site.

POPULATION GROWTH

The World Bank (2012b, pp. 181-182) states that the annual population growth rate is nearly 8 percent in DSM, being one of the fastest growing cities in Sub-Saharan Africa. Due to the rapidly growing population the need for basic services and infrastructure such as housing, water, sanitation and roads has increased, which has strained the available resources (UN-HABITAT 2009, p. 11).

URBAN POVERTY

UN-HABITAT (2009, p. 11) informs that the rapid population growth has entailed issues of unemployment and inequalities. The majority of the youths are unemployed, which leaves them wandering the streets. As a result, the number of urban crimes has increased. The issues of unemployment and inequalities among urban residents must be addressed in order to reverse urban poverty. This should be achieved by promoting youth empowerment through the creation of employment opportunities.

Issues of urban poverty were clearly noticeable in the CBD and Kivukoni. In fact, homeless people are basically living at a certain area along Kivukoni Waterfront. There have also been issues of crime along Kivukoni Road. When interviewing people at the project site, it became clear that many of them were poor and some people, often youths, were unemployed.

THE FORMAL AND INFORMAL CITY

Rasmussen (2013, p. 3) informs that the formal city has developed consciously along the four main radial roads; the Bagamoyo Road, the Morogoro Road, the Julius Nyerere Road and Kilwa Road. Apart from these concentric roads, there is also the Nelson Mandela/Sam Nujoma Road which connects the city transversally (figure 45). The informal city has developed between the main roads and in the periphery.

Over 80 percent of the population in DSM lives in unplanned settlements (UN-HABITAT 2010a, p. 17). Rasmussen (2013, p. 3-4) means that informal settlements in DSM are characterized by low-density and low-rise urbanization, which entails issues of land underutilization and urban sprawl. Services within the unplanned settlements are poor. The unplanned areas in Tanzania are often suffering from inadequate access to safe water, sanitation and other infrastructure (UN-HABITAT 2010c, p. 6). Due to increasing levels of poverty, population growth and the lack of a sustainable housing policy, urban growth is often resulting in the expansion of informal settlements (The World Bank 2002, p. 7).

The CBD is a part of the formal city since it is a planned area which was established during colonial time.

TRAFFIC AND INFRASTRUCTURE

The road network was planned and built during German and British rule (UN-HABITAT 2009, p. 12). Kiunsi (2013, pp. 96-99) informs that roads in many of the residential and commercial areas in DSM are not paved and poorly maintained. DSM only has one CBD, which means that a majority of the major urban

functions and services are located at one point. This causes traffic congestion along the major arterial roads and sections of the city and in the CBD.

The fact that the streets in DSM often lack walkways, bicycle paths, crosswalks, footbridges and pedestrian signs and markings entails situations where pedestrians and bicyclists have to share space with motorized transport (UN-HABITAT 2009, p. 12). This entails insecurity which leads to increased number of accidents.

During our stay in DSM we observed that the city has until recently been served by local mini-buses, daladalas, as a mean of public transportation. Daladalas are often overcrowded and have no specific time for departure and arrival. DSM is currently launching a new public transportation, the BRT system. Mlambo³ informs that the BRT system will replace the daladalas. She stresses the fact that the new system will be organized public transport which will make it possible to plan the trips and transportation costs. We observed that the BRT is currently being constructed along Kivukoni Road, which poses a large transformation of the road environment next to the waterfront.

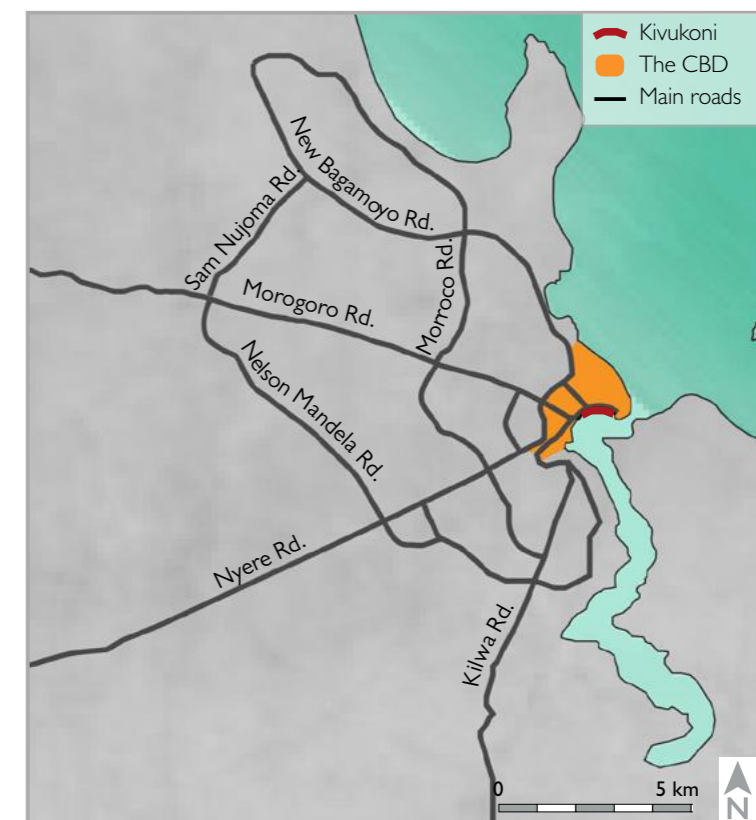


Figure 45. The formal city has developed consciously along four main radial roads. One road connects the city transversally, the Nelson Mandela/Sam Nujoma Road. The orange area represents the CBD where Kivukoni is situated.

³Asteria Mlambo, urban planner at Dar Rapid Transit Agency, interview 10th of April 2014.

SOLID WASTE MANAGEMENT

SWM is one of the most difficult environmental problems in urban centers of developing countries, where services are insufficient (UN-HABITAT 2010b, p. 18). This is also the case in DSM. The World Bank (2012a, p. 6) describes the situation of SWM in DSM as follows:

“...less than 40% of the total wastes generated in the city are collected and disposed of in the Pugu dump site or otherwise recovered. The remaining wastes (approximately 60%) are either dumped by the road side or into drainage canals contributing to health problems for local residents, annual flooding events and methane generation.”

The World Bank (2012a, p. 6) continues that in 2011, the collection rate of waste generated within IMC was 39 percent. Studies revealed that 40 percent of the waste was organic, followed by 16 percent plastics, 10 yard waste and 8 percent paper. Metals made out 5 percent and ceramics about 6 percent of the total.

There is an uncertainty regarding how much waste that is recycled. According to Environmental Resources Consultancy, about 5 percent is recycled, but Dar Local Authority has estimated that about 18 percent is recycled (The World Bank 2012a, p. 10). The percentage is more in between these numbers.

During our stay in DSM, we did not observe a single garbage bin at public spaces. Waste had to be disposed either in garbage bins inside buildings or in open spaces within the city. Kivukoni Waterfront is used as a disposal site by people walking along Kivukoni Road (figure 46).



Figure 46. Kivukoni Waterfront is often used for disposal of solid waste which leads to degradation of the site.

THE INFORMAL AND PRIVATE SECTORS

About 98 percent of the businesses are informal and take place outside the legal system, which means that the private sector is largely a part of the informal sector (UN-HABITAT 2009, p. 11). The Government of Tanzania has made attempts to encourage the informal sector to join the formal market, but without success. The regulatory and administrative procedures need to be more efficient and decentralized to encourage informal sector participation in the formal market. We observed the informal sector everywhere in DSM, especially along the streets. There are numerous informal vendors along Kivukoni Road.

CITY PLANNING AND MANAGEMENT

Three master plans prepared in 1949, 1968 and 1979 have been implemented for the city (Lupala 2002, pp. 44, 47, 49). The overall goal of the master plans of 1968 and 1979 was to reverse the negative impact of the colonial racial segregation and the existing informal settlements hence striving for a planned city development (Lupala 2002, pp. 47-49). Despite the attempts of addressing the expansion of informal settlements, they continue to dominate in shaping the ensuing urban types and the city structure of DSM (Lupala 2002, p. 52).

Moss, Happold, Afri Arch & Q-consult (2013, p. 1) inform that the latest master plan was initialized by the Ministry of Lands, Housing and Human Settlements Development, DCC and the three municipalities as well as major stakeholders. The master plan ranges from 2013-2032. Moss et al. (2013, p. 116) inform that one of the main goals of the new master plan is to address the challenges of the population growth and peri-urban areas by decentralizing the city center in order to reduce congestions. This will be achieved by creating satellite urban centers.

Another issue of the city planning in developing countries is that green spaces are not prioritized in the process, since they are considered as less important than buildings, roads and infrastructure (Mng'ong'o 2005, p. 6). This is also the case in DSM where green spaces are rapidly disappearing.



Figure 47. Informal settlements are often suffering from inadequate access to safe water, sanitation and other infrastructure.

KEY POINTS OF DAR ES SALAAM

- DSM emerged from the area where Kivukoni is situated. As a result, some of the oldest buildings are situated along Kivukoni Road hence the surroundings of the project site are featured by a unique cultural heritage.
- The three eras, Arab, German and British, established zones of different building structures and races, which entailed segregation that is still present in the city today.
- The population in DSM has an annual growth rate of nearly 8 percent.
- Strained resources and incoherent governance means the DCC is failing to provide residents with basic services and infrastructure.
- The rapid population growth poses issues of unemployment, inequalities and increase in urban crime, which can be observed at the project site.
- The formal city of DSM has developed along the main roads, and the informal city has developed between these roads and in the periphery.
- Informal settlements are still in expansion, due to increasing levels of poverty, population growth and the lack of a sustainable housing policy.
- The situation of traffic and infrastructure needs to be improved. DSM is currently launching a new mean of public transport referred to as the BRT, which poses a large transformation of Kivukoni Road along the waterfront.
- SWM is a major problem which needs to be addressed. Kivukoni Waterfront is currently used as a disposal site, which causes degradation.
- The current master plan suggests introducing satellite urban centers to decongest the city center and addressing the challenging population growth.
- Green spaces in DSM are not prioritized in the city planning and are therefore disappearing rapidly.

The Central Business District

The following section provides insight in the key issues of the CBD and how a development of Kivukoni Waterfront can help to improve these issues.

LAND USE

The CBD is a mixed-use area with a high concentration of institutional, commercial, light industrial activities and few residential areas, as shown in figure 52 (Ministry of Land and Human Settlements Development n.d., p. 10). One third of the CBD consist of institutional use. The buildings along Kivukoni Road are mainly for institutional use and will continue to be used for this purpose (Ministry of Land and Human Settlements Development n.d., p. 31). Cultural functions, business offices and Government activities will continue to be predominant in the Kivukoni area.

Lekule⁴ informs that during the weekdays, there is a huge population commuting to the CBD for work which causes overcrowding (figure 49). Moreover, the CBD is deserted during evenings and weekends, which was clearly noticed during our observations. On Sundays there were basically no people present, and the streets were almost completely empty from traffic (figure 48). Lekule⁴ states that the commuting population needs to be reduced. He adds that it is also important to create a sense of belonging in the CBD to improve security. Therefore, it is necessary to make people stay in the CBD even during evenings and weekends. There should never be an absence of people. We believe that a development of leisure activities at Kivukoni Waterfront can play an important role for attracting people in evenings and weekends.



Figure 48. Completely deserted. Maktaba Street in CBD on a Sunday.



Figure 49. Overcrowded. Maktaba Street in CBD on a Tuesday.

THE ARCHITECTURE

We observed that the architecture of the CBD consists of a mix of historic buildings in European style and newly constructed modern high-rise buildings (figure 50). According to the Ministry of Land and Human Settlements Development (n.d., p. 32), the

lack of vacant land for horizontal expansion of the CBD means the city has to expand vertically to accommodate the increasing demand for commercial and business office space in the area. Furthermore, the building height has been so haphazardly organized that no particular town form can be perceived. In addition, new development does not enhance buildings and areas of historic, architectural and cultural importance. The central area therefore lacks architectural coherence and harmony (Ministry of Land and Human Settlements Development n.d., p. 34).

In order to achieve architectural harmony, new structures are expected to conform with the general ambience of the streets though individual buildings may have their own unique features (Ministry of Land and Human Settlements Development n.d., pp. 33-34). The height of new buildings will be lower towards the ocean and higher inland. In our opinion, the overall impression of the architecture in CBD can be improved by a well-designed and well-functioning waterfront with a strong identity. The waterfront design should consider the existing town form and enhance areas of historic, architectural and cultural importance.

TRAFFIC AND INFRASTRUCTURE

The CBD is suffering from a poor road network, insufficient traffic signs and lights, a shortage of parking spaces and inadequate public transport which causes congestion (UN-HABITAT 2009, p. 12). Congestion, traffic jams and accidents are common in most of the roads and streets in the area (Ministry of Land and Human Settlements Development n.d., p. 16). There is a considerable increase of traffic volumes in the CBD, caused by a rise in private car ownership (Ministry of Land and Human Settlements Development n.d., pp. 17-18). Studies made on transport mode used by the commuters have shown that 46 percent of the incoming population use public transport, 34 percent use private transport and 20 percent are pedestrians, which indicate that the public transport and pedestrian safety needs to be improved to meet the demand of the working population.

When cars were introduced in the CBD space was claimed from the pedestrian domain, which has caused a lack of pedestrian accommodation (Ministry of Land and Human Settlements Development n.d., p. 5). This is a severe problem. Most roads and streets have no walkways or pavements (Ministry of Land and Human Settlements Development n.d., p. 18). Where pavement exists, parked vehicles occupy them (figure 51). Pedestrians are forced to walk along edges of the roads which entail accidents and interference with motorized traffic. Kivukoni Road is one of the most problematic roads regarding pedestrian safety.

A well designed network of pedestrian infrastructure should be implemented in order to improve the safety and convenience for pedestrians (Ministry of Land and Human Settlements Development n.d., p. 38). Moreover, trees should be planted to encourage walking. The issue of street vendors occupying pavements needs to be addressed as well (Ministry of Land and Human Settlements Development n.d., p. 36). We believe that

the creation of new walkways along the waterfront can improve the situation for pedestrians along Kivukoni Road.



Figure 50. Historic buildings mixed with modern high-rise buildings is characteristic for the architecture of the CBD. There is a lack of architectural coherence.



Figure 51. Pavement occupied by parked vehicles, a common issue in the CBD.

SEWERAGE SYSTEMS AND SOLID WASTE MANAGEMENT

Wastewater treatment has for long been an issue in CBD and DSM in general. Today, raw sewerage from the CBD is discharged into the ocean hence causing pollution (Ministry of Land and Human Settlements Development n.d., p. 23). Pollution poses a severe threat to marine resources and beach environments (Ministry of Land and Human Settlements Development n.d., p. 42). This also means that Kivukoni is an unhealthy place for swimming.

The SWM has for long been very poor in the CBD as well as the rest of the city (Ministry of Land and Human Settlements Development n.d., p. 22). Today, a private company named Green Waste Pro Limited is responsible for SWM within the Ilala district (Green Waste Pro Limited 2012). It is important that the waterfront design facilitates a well-functioning SWM.

FUTURE DEVELOPMENT PLANS

The Central Area Redevelopment Plan contains maps of existing and future land use of the CBD (figures 52 and 53). When comparing these maps, it becomes clear that The Ministry of Land and Human Settlements Development suggests more commercial and residential use and less institutional use. It also suggests reducing the amount of parking lots and vacant areas. The existing public spaces and green spaces should be preserved and developed. Kivukoni Waterfront in particular is mentioned as a space that has large potential to become an attractive public green space (Ministry of Land and Human Settlements Development n.d., p. 57).

⁴Camilius T. Lekule, professor at Ardhi University, interview 17th of April 2014.

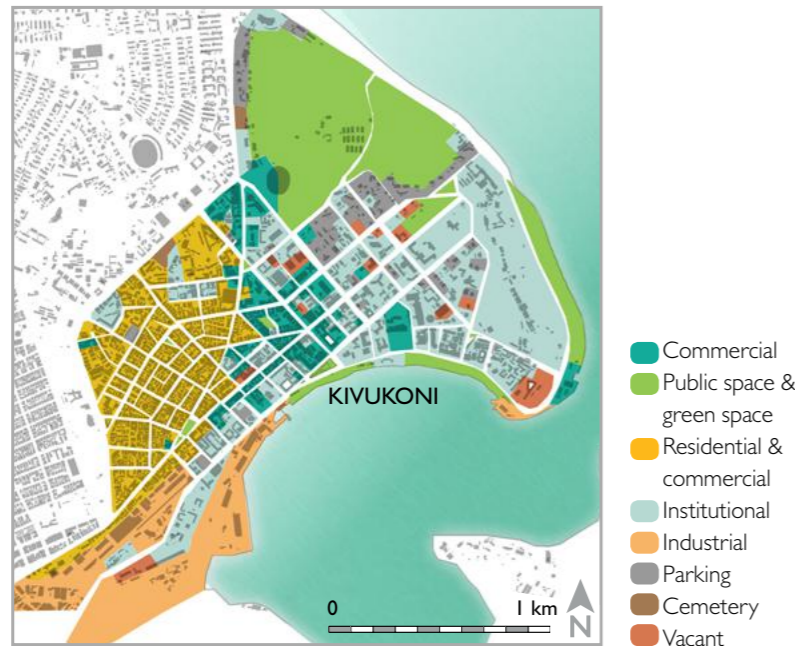


Figure 52. Existing land use of the CBD. There are few commercial and residential areas. Kivukoni Waterfront is earmarked as a public space, except for the marine police area in the center of the waterfront. Source: Ministry of Land and Human Settlements Development n.d., Drawing No. 3.1.

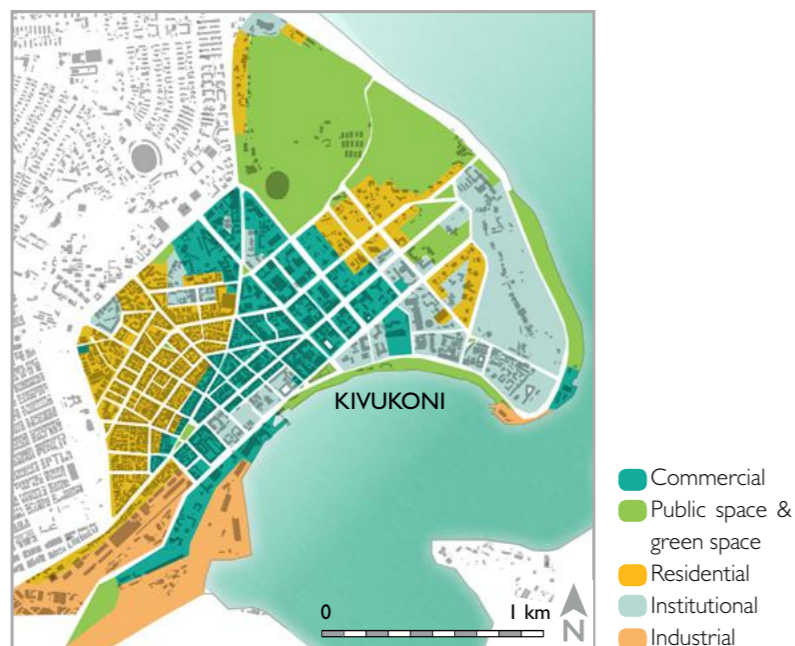


Figure 53. Future land use of the CBD. Ministry of Land and Human Settlements Development suggests an increase in commercial and residential use. Existing public spaces and green spaces should be preserved and developed. Kivukoni Waterfront should become entirely public hence relocating the marine police. Source: Ministry of Land and Human Settlements Development n.d., Drawing No. 1.3.

KEY POINTS OF THE CENTRAL BUSINESS DISTRICT

- Congestion and overcrowding are major issues during work hours on weekdays.
- The CBD is basically deserted during evenings and weekends. A development of leisure activities at Kivukoni can play an important role for attracting people to CBD outside work hours.
- The architecture lacks coherence. Developing Kivukoni with a strong identity can help improve the overall impression of the architecture in CBD.
- Motorized transportation is dominating, setting pedestrians aside hence causing insecurity. Most roads and streets lack walkways, pavements and crosswalks. Pedestrian accommodation needs to be developed in order to improve pedestrian safety. Creating new walkways along the waterfront will improve the situation for pedestrians along Kivukoni Road.
- Raw sewerage from the CBD is discharged right into the ocean which causes pollution and a threat to marine resources and beach environments. This also means that the waterfront an unhealthy place for swimming activities.
- The SWM is poor. It is important that the waterfront design facilitates a well-functioning SWM.
- The future land use should focus on introducing more commercial and residential use and reducing institutional use.
- Existing public spaces and green spaces should be preserved and developed. Kivukoni Waterfront in particular is mentioned as a space that should become entirely public and developed for recreational purposes.

5

PUBLIC SPACE AND GREEN SPACE IN DAR ES SALAAM AND CENTRAL BUSINESS DISTRICT

Chapter five addresses public space and green space in DSM and CBD. It starts by outlining the benefits of public spaces in general and the current situation of public spaces in DSM and CBD followed by its key issues. The next section outlines the benefits of green spaces in general and the current situation of green spaces in DSM and CBD followed by its key issues. To gain an understanding of what public space and green space exist in the CBD and what values a public space development of Kivukoni Waterfront can provide the CBD with, we observed seven public spaces and/or green spaces in or in the outskirts of the CBD. The following section explains the design and structure, density of people, activities, analyses and learning experiences of the sites, which are the following: Bustani ya Posta, Mnaḗi Mmoja, a pocket park along Samora Avenue, the streets Samora Avenue and Sokoine Drive, a green space close to Aga Khan Hospital, The Botanical Garden and Ocean Road. Finally, the future plans of public space and green space in DSM and CBD are outlined.

Public space in Dar es Salaam and Central Business District

The following section outlines the benefits of public space in general, the current situation of public space in DSM and the CBD as well as its key issues.

THE BENEFITS OF PUBLIC SPACE

Public spaces can be considered as the common living room of the citizens. They are structured as a network, which for example includes roads and streets together with squares and parks (Mrema 2013, p. 202). There are numerous benefits of well-designed and well-maintained public spaces; some of them are as following:

- Providing economic values by attracting companies which in turn attract customers, employees and services (CABE 2004, p. 4).
- Providing social values by creating meeting places and bringing communities together hence increasing social inclusion (CABE 2004, pp. 12-13).
- Improving physical and mental health by encouraging people to walk more, pursue sports and exercise, or simply to enjoy a green environment (CABE 2004, p. 6).
- Reducing crime and fear of crime by for instance implementing community gardens, increased lighting and natural surveillance (CABE 2004, pp. 10-11).
- Increasing movement in and between spaces, which encourages pedestrians and bicyclists. Improved public transport can reduce the levels of motorized traffic (CABE 2004, pp. 14-15).

CURRENT SITUATION OF PUBLIC SPACE IN DAR ES SALAAM AND CENTRAL BUSINESS DISTRICT

Many activities and social interaction between people occur outdoor in DSM due to the tropical climate and the Tanzanian culture. However, DSM has few formal public spaces such as parks and squares, where people have the opportunity to spend quality time for recreation. Moreover, most of the existing public spaces are not designed and are lacking proper maintenance which leads to further degradation.

Coco Beach is a public green space located on the Msasani Peninsula in northern DSM. The beach is a vibrant meeting place, mainly for local people, and perhaps the closest to a public city park that DSM has at present. We visited Coco Beach during a Sunday afternoon and observed people pursuing a wide range of activities, such as swimming, playing different games and ball sports, eating, drinking, sunbathing and relaxing in the shade (figure 54). However, despite the popularity of this beach, it is not well-designed or maintained. The beach is lacking important facilities such as public restrooms and changing facilities. There are no garbage bins and solid waste is littered along the entire beach and in the water (figure 55).

Well-designed and maintained outdoor environments are often found close to commercial businesses, such as Slipway. Slipway is

a shopping and leisure center situated northwest on the Msasani Peninsula. The area is designed for different target groups; adults, children and youths, tourists as well as local people. Next to the Indian Ocean a playground is located where children were playing while their parents were observing them sitting in the shade (figure 56). An open paved area provided some youths the opportunity to pursue skating (figure 57).



Figure 54. Coco Beach is basically the only accessible public beach in DSM. It is a vibrant meeting place and is used for pursuing a wide range of activities.



Figure 55. Coco Beach is lacking garbage bins and management which results in littering of solid waste along the entire beach.



Figure 56. A playground close to the ocean at Slipway. The area is designed for different target groups.



Figure 57. Skating was a popular activity among youths at Slipway.

In the CBD, where people are constantly in movement and the stressful city pulse is more intense than in other parts of DSM, the absence of spaces for recreation is even more palpable. Ministry of Land and Human Settlements Development (n.d., p. 25) states that the public spaces in the CBD are characterized by dispersed litter due to lack of services, poor management and absence of garbage bins. Moreover, the lack of public toilets and benches decreases the quality of the public spaces which makes it difficult for people to spend quality time in the city center. The fact that people are using informal public spaces for recreational activities that are insecure and/or unhealthy like the streets indicates a need for formally planned public spaces.

The majority of existing public spaces in the CBD are the streets. The streets are either missing or have narrow sidewalks, and in addition the roadsides are often used for parking. Despite the inadequate street design the urban dwellers use streets in their everyday life, for instance to make small business, socialize, play

games and relax. The frequent use causes for example damaged paving (figure 58). The most common activity observed along the streets is informal businesses (figure 61). Vendors are selling edibles and various items, either on pushcarts or on rugs placed on the ground. The informal businesses are occupying the already limited public space.

Other public spaces than the streets in the CBD are small parks like Bustani ya Posta, and sites along the coast, for instance Kivukoni ferry terminal and Ocean Road (figure 59). Despite the obvious lack of formal public spaces in DSM and especially the CBD, there are some elements indicating that there is a desire for creating attractive outdoor environments, for instance public art in roundabouts (figure 60).



Figure 58. Damaged paving. The few public spaces that exist in DSM are often of poor quality.



Figure 59. Public spaces in the CBD can, among others, be found along the coast, for instance at Kivukoni ferry terminal shown in the picture.



Figure 60. Public art in a roundabout in CBD indicates a desire to create attractive outdoor environments.



Figure 61. Informal businesses along the sidewalk at Kivukoni Road. The most common activity observed along the streets in DSM.

KEY ISSUES OF PUBLIC SPACE IN DAR ES SALAAM AND CENTRAL BUSINESS DISTRICT

- There is a lack of formally planned and designed public spaces. The public spaces that exist are often of poor quality and are lacking maintenance which leads to further degradation.
- The lack of formal public spaces of high quality results in people using insecure and/or unhealthy informal public spaces, like streets in CBD. This indicates that there is a need for formal high quality public spaces.

Green space in Dar es Salaam and Central Business District

The following section outlines the benefits of green space in general, the current situation of green space in DSM and the CBD as well as its key issues.

THE BENEFITS OF GREEN SPACE

The relation between people's health in communities and the quality of the urban environment is highlighted and observed around the globe (Mng'ong'o 2004, p. 3). According to Mng'ong'o (2004, pp. 4-5) green spaces are vital for providing social, economic and ecological values in cities. Mng'ong'o (2004, pp. 4-5) informs that some of the positive effects of green spaces are as following:

- Controlling temperature and improving the climate conditions
- Promoting biodiversity
- Reducing noise and air pollution
- Providing space for recreation
- Providing opportunity for interaction between people
- Providing cities with aesthetic values

CURRENT SITUATION OF GREEN SPACES IN DAR ES SALAAM AND CENTRAL BUSINESS DISTRICT

According to Mng'ong'o (2004, p. 1) the urban development in DSM has a negative impact on the green spaces in the city, referred to as a browning process. A problem in developing countries is that the cities are planned and designed from an engineering perspective as the population increases (Mng'ong'o 2004, p. 6). As a result, green spaces are set aside because they are considered as less significant than buildings, services and infrastructure. Heidt & Neef (2008, p. 84) claim that the prioritizing of infrastructure leads to increased traffic, which results in traffic jams, accidents and a stressful society. The authors enlighten that to counteract these negative effects in today's high-density cities, green spaces should be preserved and rehabilitated to become a greater part of the city since the benefits of green spaces can improve people's life quality in the urban community. Mng'ong'o (2004, p. 6) informs that green spaces are disappearing rapidly in DSM like in other developing countries. The green spaces need to be highlighted and a greater part of the planning process in developing countries, such as Tanzania and especially in DSM.

Large green spaces in DSM are for instance the valleys of Msimbazi River, Mzinga and Kizinga Rivers, that are featured by steep slopes (Mng'ong'o 2004, pp. 34-35), which means they are inaccessible (figure 62). However, since green spaces are not prioritized in the city's development, the continuous greenery of the valleys is split into small areas of green spaces (Mng'ong'o 2004, pp. 108-109). Other large green spaces in DSM can be found along the coast. However, many coastal areas are either unplanned or inaccessible today because of private businesses being established that cut off stretches of the coast from public use.

Ministry of Land and Human Settlements Development (n.d., p. 56) state that there is a lack of greenery in the CBD which can be observed along the streets and public spaces, where only few trees have been planted. Furthermore, they argue that green spaces have to be developed in the CBD in order to reinforce the green qualities that once existed but were set aside for the construction of buildings, services and infrastructure.

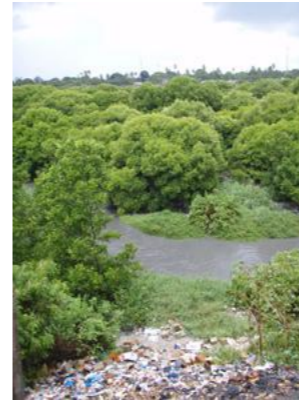


Figure 62. Msimbazi River is one of the larger green spaces in DSM. Steep slopes and dense vegetation makes it inaccessible. It is also littered. Photo: © Amanda Larsson

We observed two types of green spaces in CBD; public green spaces and restricted green spaces. The public green spaces in the CBD are usually not designed and often littered or polluted. Bustani ya Posta is the only public green space in the CBD that has been improved with plantings, paving and outdoor furniture (Ministry of Land and Human Settlements Development n.d., p. 27). Only a few public green spaces in CBD are maintained. These are for instance pocket parks and other small public green spaces along the streets and by the entrance or close to buildings, but these are often financed by private companies. Askari monument, a historic statue located in a roundabout with plantings, is an example of maintained small green space that provides aesthetic value to the CBD.

The restricted green spaces have limited access and include smaller private gardens and a majority of the larger green spaces in the CBD. The larger restricted green spaces are either entirely private, like the State House garden, or there is an entrance fee, for instance at the Botanical Garden or at Gymkhana grounds, a place for sport activities. Limited access can also be a result of the sites' physical conditions or design. For instance, steep slopes and dense vegetation at Kivukoni Waterfront makes the site inaccessible hence partly unutilized.

KEY ISSUES OF GREEN SPACE IN DAR ES SALAAM AND CENTRAL BUSINESS DISTRICT

- Green spaces in DSM are not prioritized in the planning process, hence they are disappearing rapidly.
- A majority of the green spaces in DSM are restricted, inaccessible or unplanned.
- There is a lack of greenery in the CBD. Moreover, most green spaces are restricted.
- Lack of management, pollution and littering cause degradation of existing green spaces in DSM, which in turn make them more difficult to preserve and improve.

Site observations

In order to gain an understanding of what public spaces and green spaces that exist in CBD, we conducted site observations of public spaces and green spaces in and in the outskirts of the CBD (figure 63). This was also useful to gain an understanding of what values a development of Kivukoni Waterfront can provide the CBD with. We observed the following sites: Bustani ya Posta, Mnazi Mmoja, a pocket park along Samora Avenue, the streets Samora Avenue and Sokoine Drive, a green space close to Aga Khan Hospital, the Botanical Garden and Ocean Road. We observed the design and structure, density of people and activities that occurred. In the end we analysed the sites which generated learning experiences of how people use public space and green space in CBD. We had the learning experiences in mind when developing the design proposal for Kivukoni Waterfront.



Figure 63. The map shows the location of the public spaces and green spaces that we observed.

- 1 Bustani ya Posta
- 2 Mnazi Mmoja
- 3 Pocket park along Samora Avenue
- 4 Streets: Samora Avenue and Sokoine Drive
- 5 Green area close to Aga Khan Hospital
- 6 Botanical garden
- 7 Ocean Road
- Kivukoni Waterfront
- Border of the CBD

BUSTANI YA POSTA

Type of space: Public green space.

Date: Several observations.

Time: Day and night.

Weather: Different weather conditions.

DESIGN AND STRUCTURE

The central part is an open paved area, with a concrete monument and some small palm trees. The open paved area is enclosed by different plantings, lawns with low hedges around them and a low sitting wall. Large trees close to the sitting wall provide shade (figure 66).

DENSITY OF PEOPLE

The park has a medium to high density of visitors. It is a very popular meeting place in the CBD. People of all ages come here during the day, especially around 4 to 5 pm after a day of work. A lot of people spend their time here before they travel home from work.

ACTIVITIES

Many different activities occurred, especially in the shade of trees. People sat at benches or the sitting wall, used their phones, someone was about to post a letter, other people talked, hanged out and relaxed. Another person read the newspaper and there were also people laying down or sitting on the lawn. Workers were playing draft on their game board while waiting for ferry departures (figure 65). Vendors used the park sometimes, but were often chased off by police officers or traffic attendants. People only passed through the paved area during sunny weather, it was too hot to sit down at the benches in the sun. During cloudy weather and night time there were a lot more people at the paved area.

ANALYSIS

This park is one of the lush, maintained, paved and furnished public green spaces in the CBD (figure 64). There is a constant presence of people due to its central location and high accessibility. The seats are very popular, especially the ones that are shaded. The sitting wall with large trees around was especially popular for people to gather and stay for a longer period of time, for instance to socialize and to play board games.



Figure 64. Bustani ya Posta. One of few public green spaces in CBD that has been improved by introducing plantings, paving and furniture.

“It is a good place to play draft. The tree provide shade, it’s nice and cool to sit here.”

Alfred Kienjeo, age 28, working with IT business.



Figure 65. Playing board games was a popular activity at several places in CBD, especially at Bustani ya Posta. Figure 66. Shading trees make the low wall a nice cool seat.

LEARNING EXPERIENCE

- + ▪ Bustani ya Posta is one of few public green spaces in CBD that has been improved with plantings, paving and furniture. This has generated a popular meeting place.
- The central location and the high accessibility entail a constant presence of people.
- Shading trees create popular meeting places.
- Plantings and lawns provide a lush environment with aesthetic values.
- ▪ Large open paved areas should be used to a limited extent, since they are only used when it is cloudy and during night time.

MNAZI MMOJA

Type of space: Restricted green space.

Date: Tuesday, 1st of April 2014.

Time: 13.30 – 14.30.

Weather: Hot and sunny, partly cloudy.

DESIGN AND STRUCTURE

Students at ARU and employees at Epithome architects claim that Mnazi Mmoja is basically the only official public park in DSM. It is a large lawn surrounded by trees and a wall, approximately 2 meters high. Outside the wall there are walkways and streets with busy traffic. A trail is crossing the lawn, leading from one gate in the wall to another (figure 67). The gates were often closed. In the center of the lawn there is a monument with low hedges around it (figure 70). In a corner of the park there is a pavilion, which seems to be able to use as a stage (figure 71).

DENSITY OF PEOPLE

There was a low density of people in the park. Outside the enclosing wall a lot of people passed by but only a few people entered the park. People that entered were only passing by.

ACTIVITIES

Few activities occurred during our observation, most people only passed by (figure 67). A man was sitting on a step of the pavilion (figure 71) and a few people were standing beneath the tree canopies in the shade. A group of men serving the military were moving around and some vehicles were parked towards the wall under the trees (figure 69). There were vendors outside the fence along the entire walkway, but no vendor inside the park. When speaking to students at ARU, they claim that this park is mainly used for special occasions and events, for instance to celebrate holidays.

ANALYSIS

It is a lush park that provides aesthetic values to the CBD, but the absence of people and the wall makes it deserted and perceived as a restricted green space. The high wall acts as both a visual and physical barrier which delimits the access to the park. Moreover, the wall is perceived as unwelcoming (figure 68). However, it mitigates traffic disturbances from the busy traffic. The few people that visited the park were seeking shade, either under trees or in the pavilion.



Figure 67. Most people that entered the park were only passing by. In this picture, youths in school uniforms are passing by on a trail which crosses the lawn.



Figure 68. The combined wall and fence which encloses the park acts as both a visual and physical barrier. As a result, the park is perceived as a restricted green space. Figure 69. Some vehicles were parked in the shade of trees.



Figure 70. A monument has been raised in the center of the park. Figure 71. The pavilion provides shade and can most likely be used as a stage.

LEARNING EXPERIENCE

- + ▪ The wall is mitigating traffic disturbances.
- ▪ The wall delimits the access to the park and is perceived as unwelcoming.
- Absence of people and the wall makes the park deserted and perceived as a restricted green space.

POCKET PARK ALONG SAMORA AVENUE

Type of space: Public green space.

Date: Tuesday, 1st of April 2014.

Time: 13.00 – 13.30.

Weather: Sunny.

DESIGN AND STRUCTURE

This is a small pocket park that consists of lawns and some trees, shrubs and plants. The park is enclosed by hedges, approximately 1.5 meters high. A low wall stretches along the north edge of the park. Two straight paved walkways cross the park.

DENSITY OF PEOPLE

The pocket park has a medium density of visitors. The visitors were people of all ages, from school youths to middle aged business people.

ACTIVITIES

People passed by frequently along Samora Avenue and many of them passed through the park. Most people only walked through the park (figure 72). Some people stayed for a while in the shade of the trees to greet and socialize. Two men sat down on the low wall in the north edge of the park (figure 74).

ANALYSIS

This small public green space provides aesthetic values to the CBD. It is easy to access and walk through. The lack of seats decreases the quality of the park and as a result few people spend time here for recreation. The two men sitting on the low wall indicate a need for more seats. The hedges create a soft edge towards the surrounding streets and contribute to a lush impression when standing outside the park. However, they do not mitigate the traffic disturbances from Samora Avenue (figure 73). The park seems to be quite well-maintained.



Figure 72. Most people were only passing by on the two straight walkways which cross the pocket park.



Figure 73. Hedges create soft edges towards the streets outside the park. However, the hedges do not mitigate the traffic disturbances from Samora Avenue. Figure 74. Essential functions such as seats are missing which means people are sitting on informal seats such as the low wall.

LEARNING EXPERIENCE

- + This public green space provides the CBD with aesthetic values.
 - The hedges create a lush impression when viewing the park from outside on Samora Avenue.
- The lack of seats decreases the quality of the park and as a result few people spend time here for recreation.

STREETS: SAMORA AVENUE AND SOKOINE DRIVE

Type of space: Public space/Public green space.

Date: Several observations.

Time: Several observations.

Weather: Different weather conditions.

DESIGN AND STRUCTURE

Samora Avenue and Sokoine Drive are two parallel streets flanked by a mix of low-rise and modern high-rise buildings hosting commercial and institutional businesses. Large trees are standing in rows on both sides in some sections of the streets, which together with extensions of the buildings, such as roofs on pillars, provide the streets with shade. The streets have no crosswalks. Pavement exists only at some stretches, but they were often occupied by parked vehicles.

DENSITY OF PEOPLE

There was a frequently high density of pedestrians and motorized traffic.

ACTIVITIES

People used the side of the streets for varying activities. Some people sat down at improvised seats for socializing or playing games such as Draft or Kalah. Vendors were located in some spots along the pavements or in the shade of the extensions of the buildings, where they were selling different items. Parked vehicles occupied the side of the streets and parts of the pavements, which set aside pedestrians. In the center of the streets there was a lot of motorized traffic; private vehicles, daladalas and bodabodas. We observed very few bicyclists. There were only a few spaces of wide pavement free from vehicles where people could gather (figure 75).

ANALYSIS

The green rows of trees create shade and attractive and lush street environments along the otherwise grey streets. Since the motorized traffic is dominating there is a palpable lack of space for pedestrians. The lack of pedestrian accommodation causes insecure traffic environments since pedestrian have to share space with the motorized traffic (figure 76). Despite this the side of the streets are used for a wide range of activities in people's everyday life. Outdoor dinings of restaurants entail situations where people greet and socialize along the street hence contributing to the vivid street life.



Figure 75. Only a few spaces along the pavement, like this one, were free from parked vehicles.



Figure 76. The lack of pedestrian accommodation, for instance crosswalks, poses unsafe traffic situations.

LEARNING EXPERIENCE

- + Trees provide shade and a lush and attractive street environment.
 - The streets are frequently used for a wide range of activities in people's everyday life.
 - Buildings hosting commercial businesses contribute to the vivid street life.
- Lack of pedestrian accommodation entail insecure traffic situations.

GREEN SPACE CLOSE TO AGA KHAN HOSPITAL

Type of space: Public green space.

Date: Friday 4th of April 2014.

Time: 15.00 – 15.30.

Weather: Sunny.

DESIGN AND STRUCTURE

This public green space consists of a large lawn, in the shape of a triangle, with several big trees. The lawn is enclosed by a knee-high wall with a railing.

DENSITY OF PEOPLE

This public green space has a medium density of visitors. There were several groups of people of different ages.

ACTIVITIES

Many people passed by. People were sitting on the lawn in the shade of the large trees. Some people were gathered in groups on the lawn, socializing, having picnic, relaxing and enjoying their everyday life (figure 77). Two men were sitting on the wall that encloses the lawn; one of them was relaxing while the other was talking on his phone (figure 78). A lot of people passed by and some jumped over the railing to join a group of people.

ANALYSIS

This is one of the few larger green spaces in CBD that is entirely public. The lawn was used for recreational activities and was a popular meeting place. However, only the shaded areas of the lawn were used during our observation. It is important to combine lawns with large shading trees. The wall provides the area with informal seats. Yet, formal furniture is missing and the railing limits the accessibility.



Figure 77. People are sitting on the lawn in the shade of the large trees.



Figure 78. The wall is used as a seat.

LEARNING EXPERIENCE

- +
 - One of the few larger green spaces in CBD that is entirely public.
 - Lawns generate meeting places and flexible space that can be used for a wide range of activities.
 - The wall is used as informal seat.
- - Only the shaded areas of the lawn were used. Lawns should be combined with large shading trees.
 - Furniture is missing and the railing limits the accessibility.

BOTANICAL GARDEN

Type of space: Restricted green space.

Date: Saturday 19th of April 2014.

Time: 16.00 – 17.00.

Weather: Mostly cloudy.

DESIGN AND STRUCTURE

The Botanical garden is enclosed by a waist-high wall (figure 81). The main entrance is a gate that is accessible for vehicles to enter and turn around in a roundabout. There is no sign that welcomes visitors to the Botanical garden. Several paved walkways lead visitors around the garden to explore the different plant species which has horticultural values (figure 79). Hedges and low walls serve as spatial dividers (figure 80). There are concrete benches and chairs where people can sit down and relax. The garden is overall in need of maintenance.

DENSITY OF PEOPLE

The garden was deserted at the time for our observation. There were only some garden workers in the garden.

ACTIVITIES

People passed by along surrounding streets. We were the only visitors in the garden. The absence of people can be a result of the entrance fee. Some people were sitting on the wall, but they sat directed towards the street outside the garden. One car drove through the main entrance only to turn around in the roundabout and drive away.

ANALYSIS

The entrance fee entails a deserted garden and generates a restricted green space. The enclosing wall contributes to an unwelcoming impression. The poor maintenance of walkways and walls decrease the quality of the garden and leads to further degradation, even though a lot of the plants are well-maintained. In our opinion the Botanical garden is a large asset in CBD that could be well-visited if it would become entirely public.



Figure 79. Paved walkways lead visitors around the garden to explore different plant species of horticultural values.



Figure 80. Hedges as spatial dividers.



Figure 81. The wall which encloses the Botanical Garden.

LEARNING EXPERIENCE

- +
 - A wide range of different plant species provides the CBD with horticultural values and an attractive green environment to walk around in.
 - Access to both formal and informal seats increases the quality of the garden.
- - The entrance fee means the garden is not entirely public, which results in an absence of people that in turn makes the garden unwelcoming.
 - The wall contributes to an unwelcoming impression.
 - The lack of maintenance decreases the quality and leads to further degradation.

OCEAN ROAD

Type of space: Public green space.

Date: Several visits.

Time: Several visits.

Weather: Different weather conditions.

DESIGN AND STRUCTURE

Ocean Road is a beach area that stretches along the Barack Obama Drive. There is a row of trees and/or a strip of lawn between the road and the beach (figure 82). A low wall stretches along a part of the beach (figure 83). Solid waste was littered along the shoreline.

DENSITY OF PEOPLE

The beach area has a medium to high density of visitors. It was never crowded or deserted.

ACTIVITIES

People were pursuing a wide range of activities. This was the only public green space in the CBD where we observed exercise and sport activities, such as playing football, jogging and different gymnastic exercises. A lot of people were gathered to socialize and relax, for example on the low wall by the sea or at the strip of lawn or the beach, while enjoying the ocean view (figure 82 and 83). Most activities occurred in the shade, but some occurred in the exposure of the sun, most likely because of the cooling sea breeze. Some people were swimming. A few street vendors walked or bicycled along the road, selling refreshments like young coconuts and ice-cream.

ANALYSIS

The beach is overall easy to access, even though the road is a barrier. The large area creates possibilities for a wide range of activities for different target groups in both shaded and sun exposed areas. The water is a large attraction, it is clear that people want to have contact with the water, either to just walk along the shore or go for a swim. The lack of maintenance and essential amenities such as garbage bins entail an unhealthy environment featured by pollution and littering of solid waste.



Figure 82. Some people are relaxing while others are pursuing ball games.



Figure 83. People are sitting on the wall by the ocean and enjoying the view as well as the cooling breeze. Photo: © Charlotte Sellbrandt and Kajsa Ström.

KEY POINTS OF THE SITE OBSERVATIONS

- From the site observations it becomes clear that the CBD is missing a larger public green space of high quality.
- Kivukoni Waterfront has the potential to provide the CBD with a large public green space of high quality, if well-designed.

LEARNING EXPERIENCE

- +** ▪ Larger open spaces can be used for a wide range of activities by different target groups.
 - The only public green space in CBD where exercise occurred.
 - The Indian Ocean is a large attraction for different reasons: the ocean view, swimming activities and the cooling sea breeze.
- ▪ The lack of maintenance and essential amenities such as garbage bins causes pollution and littering which leads to degradation.

FUTURE PLANS OF PUBLIC SPACE AND GREEN SPACE IN DAR ES SALAAM AND CENTRAL BUSINESS DISTRICT

Moss et al. (2013, p. 52) state that the population growth of DSM is high and is expected to double in the two future decades. Furthermore they inform that people's everyday life primarily occurs in the public spaces. In order to manage the rapid population growth, the city should provide the citizens with access to public space hence giving urban dwellers the opportunity to perform their basic needs in a flexible manner.

Moss et al. (2013, p. 86) state that the green spaces in the CBD are in need of being upgraded. Since life quality has a strong connection to the access to high quality public green spaces, the authors also argue that it is essential to introduce new green spaces with various recreational activities for children and adults and essential facilities like public restrooms. Moss et al. (2013, p. 163) argue that a green infrastructure strategy is required to make the best use of the limited public spaces and green spaces within the existing and future DSM. The infrastructure should be multifunctional, for example supporting biodiversity and recreation. Redeveloped walkways and development of existing streets and new paths for pedestrians and bicyclists should connect public green spaces, which will make it easy for people to access and use the public green spaces (Moss et al. 2013, p. 86).

Kivukoni Waterfront is highlighted in *Dar es Salaam Central Area Redevelopment Plan* as an important green space and it is stated that the waterfront should be developed into a public green space that can provide recreation for both local people and tourists (Ministry of Land and Human Settlements Development n.d., p. 57).

GETTING TO KNOW KIVUKONI

MAPPING AND ANALYSES

Chapter six describes the project site: Kivukoni Waterfront. The chapter starts by outlining its historic land use, existing land use, Kivukoni Road and the new BRT, future prospects and future plans of stakeholders. It continues by describing our impressions of the two first site visits as well as a visit during night time along the waterfront. The next section presents the mapped aspects: architecture, vegetation, topography, microclimate, sounds, solid waste and private and public areas. The following section presents the analyses of the site: views, safety, activities and city elements. Finally, a SWOT-analysis summarizes the waterfront's key strengths, weaknesses, opportunities and threats.

Kivukoni Waterfront

Kivukoni Waterfront, also known as Azania Front and Kivukoni Front, is a one kilometer long beach area between Kivukoni Road and the Indian Ocean, located in the CBD (figures 84 and 85). The waterfront is located between two ferry terminals, Zanzibar ferry terminal in the west and Kivukoni ferry terminal in the east.

HISTORIC LAND USE OF THE WATERFRONT

Mpetula² enlightens that the site is an old harbor area, which was used mainly by fishermen. She tells that the waterfront has been used for recreational purposes in the past, since the colonial period there has been paved walkways and benches in the area. There was also a dock for the governors. A few years back a part of the waterfront was used as a parking space, which can be observed when looking at old maps and photographs (figure 93).

EXISTING LAND USE OF THE WATERFRONT

Most parts of the waterfront are inaccessible today, due to various physical barriers including a fence, a wall, steep slopes, dense vegetation and the marine police area which is private. The waterfront is partly fenced off from Kivukoni Road in an attempt to reduce crime. Before the fence was put up, criminals robbed people walking along Kivukoni Road, and then escaped down the waterfront to the beach.

We perceived seven districts along the waterfront: The open littered area, The squatting area, The Mama Lishe area, The marine police area, The densely vegetated area, The sparsely vegetated area and The beach area (figure 84). The open littered area (figure 86) is located towards the Zanzibar ferry terminal. This area is sparsely vegetated and has an open character. Solid waste is littered in the slopes. The squatting area (figure 87) is established next to The open littered area, and towards The Mama Lishe area. This is a cluttered area of squatters where homeless people seem to be living. Another business established at the waterfront is Mama Lishe (figure 88), situated south of the Lutheran Church. This is a restaurant area with facilities of poor standard. The marine police area (figure 89) is a private business and is situated just south of the hotel Hyatt Regency Dar es Salaam, The Kilimanjaro. The marine police are patrolling the ocean, parts of the beach and Kivukoni Road on a regular basis. The densely vegetated area (figure 90) stretches from the marine police area towards east. This area consists of large trees, shrubs and groundcovers and is inaccessible due to steep slopes and the dense vegetation. The sparsely vegetated area (figure 91) stretches from the densely vegetated area towards the Kivukoni ferry terminal. This area consists mainly of grass and a few trees. The beach area (figure 92) stretches along the entire waterfront, and is more or less visible depending on the tide. People walk along the shore on a few occasions. The beach is being exposed to dumping of shipwrecks, which have not been removed for several years. Homeless or poor people are using the shipwrecks as a place to cook and stay during the day.



Figure 84. The map displays the districts that we perceived along Kivukoni Waterfront. Scale 1:5000/A3.

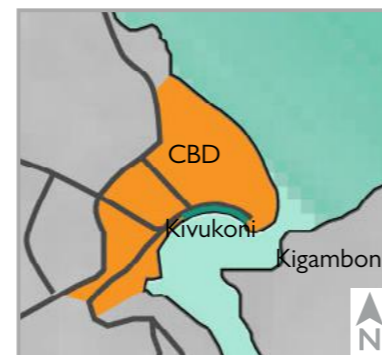


Figure 85. Location of Kivukoni Waterfront in CBD.



Figure 86. The open littered area.

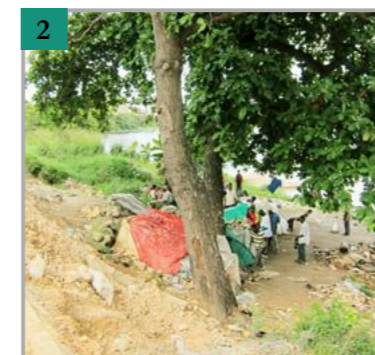


Figure 87. The squatting area.



Figure 88. The Mama Lishe area.



Figure 89. The marine police area.



Figure 90. The densely vegetated area.



Figure 91. The sparsely vegetated area.



Figure 92. The beach area.

²Hellenic AG Mpetula, urban planner at Ministry of Land and Human Settlements Development, interview 15th of April 2014.



Figure 93. A part of the waterfront was formerly used as parking lot. Photo: © Caleb Kimaro.

KIVUKONI ROAD AND THE NEW BRT

Kivukoni Road is a busy road; there is a lot of motorized traffic along the lanes as well as pedestrians and vendors along the sidewalk (figure 84). The DART agency started a construction work in 2014 to implement the BRT, which has entailed a large transformation of the road environment. The road now has two bus lanes, and two lanes for private traffic; in both directions. In the middle of the road there is a traffic island along the entire Kivukoni Road, separating the four lanes with two lanes on each side. There are also two pavements for pedestrians, one on each side of the road. We estimated the pavement to be about 2 meters wide. There are no crosswalks, except for the ones in the junction between the Lutheran Church and the new bus stop which is located just south of Bustani ya Posta (figure 94). In addition, a large number of trees were removed in conjunction with the construction work, and no new trees have been planted which has resulted in a sun exposed road environment.



Figure 94. A new bus stop is being constructed in adherence to Bustani ya Posta.

FUTURE PROSPECTS

Future prospects regarding the development of Kivukoni Waterfront are expressed in the documents *Dar es Salaam Central Area Development Plan* (Ministry of Land and Human Settlements Development nd.) and *Dar es Salaam Master plan 2012-2032* (Moss et al. 2013). Moss et al. (2013, p. 86) argue that the waterfront is the most representative place of the city, but is today an unutilized area. Rehabilitation of the waterfront would transform it into the main entrance of DSM as it once was in the past, which is essential in order to achieve a high urban quality for the entire city of DSM (Moss et al. 2013, p. 86).

Ministry of Land and Human Settlements Development (n.d., p. 3) mentions that since the CBD and the city of DSM has established further in the land, the harbor area has been neglected and abandoned:

“The idea of respecting the harbor front as the centre to the original design and layout of the city, the current trend is seen as moving away from the fact that the city and the port were inseparable. New centres are developed away from the sea and regard the harbor as a backwater front rather than a front door as it used to be.”

This indicates a desire to reclaim the waterfront as the front door of DSM.

Moss et al. (2013, p. 88) inform that new functions should be introduced along the waterfront and existing qualities of the waterfront and its surroundings should be improved in order to transform it to the most attractive place in DSM. This means for instance introducing improved public transport and improved walkways, pavements and bicycle paths that will connect public green spaces.

Ministry of Land and Human Settlements Development (n.d., p. 57) sees large potential for the waterfront to serve as a place for recreation:

“If well protected the sea front could offer a refreshing and peaceful refuge from the noise and bustle of the busy streets of the city centre. Landscaping of the sea front is crucial not only for the purpose of preserving the quality of the beach but also to provide a good passive recreational area for both local residents and tourists. The sea front should therefore be planted with trees and retaining wall should also be constructed along Kivukoni sea front.”

FUTURE PLANS OF STAKEHOLDERS

The stakeholders of the waterfront are TPA, which according to Mlabwa⁵ are the land owner, and IMC. Other potential stakeholders are Hyatt Regency Dar es Salaam, The Kilimanjaro and DART.

⁵Stephen A. Mlabwa, economist and director of planning at Tanzania Ports Authority, interview 28th of March 2014.

Mlabwa⁵ enlightens that TPA had plans for developing the waterfront a couple of years ago, but they were not implemented. Instead, TPA handed the case over to IMC. The waterfront is not a core business for the TPA, since it should be developed for recreational use (which is stated in *Dar es Salaam Master plan 2012-2032* and *Dar es Salaam Central Area Redevelopment Plan*).

According to Kiwia⁶, the IMC is planning to develop Kivukoni by using Public-Private Partnership (PPP), in order to develop the area as a public space for recreation. World Bank Group (2014) informs that PPP is a medium to long term arrangement between the public and private sectors where the private sector can provide services needed within the public sector, with a clear agreement of common objectives for delivery of the public infrastructure or public services. Kiwia⁶ claims that IMC want the inhabitants of DSM and the users of Kivukoni to express what kind of development they want for the site.

DART (n.d., p. 54) mentions that the waterfront is a potential area for developing tourism and leisure:

“It would be interesting to convert the waterfront into a boulevard for relaxing, walking, touristy commerce and leisure, through the creation of nice walkways, spaces for contemplation and staying, food kiosks and places for arts & crafts exhibitions.”

However, it does not seem that DART has any plans for developing the waterfront. Mlambo³ expressed a need for help regarding the design of the waterfront by saying “we are waiting for somebody to do the landscaping of the area.”

According to Chuma⁷, the current owner of Hyatt Regency Dar es Salaam, The Kilimanjaro has expressed a wish to create a public garden in front of the hotel. Chuma⁷ expressed it as “a small garden where parents can come and play with their children in the weekends would be nice.”

Town planner Kigadye⁸ at the IMC also sees large potential for developing the waterfront:

“I think that there are possibilities to have a good open space, a plaza or whatever. For sitting, relaxing and eating, free from traffic noise. There are possibilities to develop the seascape as well.”

As a conclusion, all stakeholders express that Kivukoni Waterfront has large potential and should be developed into a public green space for recreation.

³Asteria Mlambo, urban planner at Dar Rapid Transit Agency, interview 10th of April 2014.

⁶Rickard Emanuel Kiwia, town planner at Ilala Municipal Council, interview 25th of April 2014.

⁷Rukia Chuma, sales manager at Hyatt Regency Dar es Salaam, The Kilimanjaro, interview 20th of April 2014.

⁸Fabian Kigadye, town planner at Antiquities Division at Ilala Municipal Council, interview 10th of April 2014.

The first impressions of Kivukoni Waterfront

The following section describes our impressions of Kivukoni from the two first site visits, as well as a site visit during night time.

THE FIRST SITE OBSERVATION

On a Thursday, the 20th of March 2014, we made our first site observation to Kivukoni Waterfront. It is situated about 11-12 kilometers from our home in Sinza Mori. We went by bajaji and during the fast and jerky ride we felt excited to finally explore the project site. The bajaji driver dropped us off at the pavement at Sokoine Drive. As we turned left at Maktaba Street we saw it, the Lutheran Church. It was a beautiful church. The red-tiled roof created a contrast to the whitewashed walls, and the red-tile belfry rose above the surrounding roof-tops. It really stood out from the surrounding buildings. Next to the church there was a small public park. We found out later that the park was called Bustani ya Posta. Bustani is the Swahili word for “small garden”. Walking past the church we crossed Kivukoni Road and finally reached the waterfront. Standing on the newly built pavement next to the waterfront area, we were struck by the beautiful ocean view (figure 95). We could see the port of DSM and mainland in the horizon. After admiring the view we started to look around more, and noticed that there was a lot of solid waste littered on the slopes of the waterfront. There were all sorts of waste; organic, plastic bags, plastic bottles, metal cans, glass containers and much more (figure 96). The smell was disgusting.



Figure 95. We were struck by the beautiful ocean view and the view towards the port of DSM. However, views were often obscured by the fence and by dense vegetation.



Figure 96. Different type of solid waste was littered in the slopes of the waterfront.

To our left we saw a concrete wall next to the pavement (figure 97). Walking up to the wall, placing our hands on it and looking down on the other side we saw some kind of restaurant facilities situated on the waterfront, several meters below the pavement. We heard rattling sounds from people cooking. The facilities were severely below standard, and the environment did not look healthy (figure 98). The restaurant area was enclosed by a fence. There were no stairs down, only steep slopes at the ends of the wall. As we continued to walk along the pavement, the wall was replaced by a fence that separated the waterfront from Kivukoni Road. Right next to the restaurant facilities, there was another business; the marine police. The facilities looked quite well-



Figure 97. A part of the waterfront is separated from the road by a concrete wall.



Figure 98. Restaurant facilities of poor standard are situated on the waterfront, on the other side of the concrete wall.

maintained and were located at about the same level as the road, since the slope was quite flat.

Beyond the marine police area there was freely grown vegetation that covered the waterfront all the way to the Kivukoni ferry terminal. We thought that the waterfront area looked pleasant because of the lush greenery. However, the vegetation was quite dense at some parts, which meant it was obscuring the spectacular views. We were thinking how beautiful the waterfront could be if the vegetation were to be opened up. A majority of the people walking along Kivukoni Road were only passing by. There was no place whatsoever for them to sit down. Very few people took a moment to stop and look at the ocean view. Since the road was under construction it was closed for motorized traffic, and people were walking both on the pavement and the future bus lane next to the pavement. There were piles of construction material in places along the pavement and waterfront.

There were a lot of informal activities taking place at Kivukoni. Vendors were selling vegetables, fruits and other edibles, drinks, shoes and various small items at the pavement. They were sitting in the shade of an umbrella or in the shade of the large trees closest to the pavement. A vendor used a part of the fence to display bag packs that he was selling (figure 99). There were openings in the fence at some parts, looking as if it had been torn down.

Walking along Kivukoni Road, we noticed the varying architecture. The Lutheran Church and other low historic buildings were mixed with modern buildings, such as a hotel named Hyatt Regency Dar es Salaam, The Kilimanjaro, a high-rise tower and a glass building.

As we were getting closer to the Kivukoni ferry terminal, the sun was blazing and we felt the need for shade. We noticed an informal meeting place in the shade of two large trees. The dense vegetation did not dominate in this area; there was only high



Figure 99. A vendor was using parts of the fence to sell bag packs.

grass which made it easier to access, despite the steep slopes. There was a narrow trail in the grassy slope, leading down to the beach. We wanted to go down to investigate the beach area, but our guts told us it was not safe.

WALKING WITH INNOCENT

The next day, 21st of March, we made the second site observation accompanied by Innocent Mayenze, architect at Epitome Architects. We entered Kivukoni from Luthuli Road, to walk in the opposite direction as the day before. We observed a lot of local people and tourists on their way to and from Kivukoni ferry terminal (figure 100). Innocent told us that the ferry departs as often as every ten minutes to Kigamboni, which is a popular place to travel for tourists and local people, because of the nice private beaches. Looking towards the ferry terminal, we noticed people selling edibles and various items. A group of young men on boda bodas were gathered close to the Control Tower, hoping to pick up customers arriving with the ferry. As we looked along the Kivukoni Road, we could clearly see that most parts of the road were sun exposed, except from a few large trees providing spots of shade at the pavement next to the waterfront.

Arriving at the informal meeting point under the two large trees that we had seen the day before, we asked Innocent if we could go down to the beach area from here. He said yes, so we went down by the steep slope. We had to be careful not to fall. Standing beneath the large trees, we observed the area. A man was sleeping in the slope in the shade of the canopies (figure 101). There were several traces indicating that this was a popular meeting place. Someone had hung up a coat in a tree, while a car tire was hanging from another branch (figure 102). A lot of waste was littered and we noticed some burnt grass. It seemed that people had been cooking here. We were struck by the view towards the green areas of Kigamboni on the other side of the bay. To our right we could observe the port of DSM and Zanzibar ferry terminal and behind the vegetation along the waterfront the St Joseph Cathedral and the Lutheran Church caught our attention. Shipwrecks were abandoned further out in



Figure 100. People walking to and from Kivukoni ferry terminal.



Figure 101. As we went down the slopes we noticed a man that was sleeping in the shade of the canopies.

the ocean and also along the beach. A few people were walking along the shoreline (figure 104). Some people were using a skiff to row out in the water (figure 103). We were thinking that the water must be heavily polluted and unhealthy. Solid waste was littered along the entire shoreline and floating in the ocean as well. Two children standing up at the pavement were curious of what we were doing so they came down the slope for a closer observation. They said something in Swahili and laughed. We decided not to go down any further towards the beach; it did not feel safe walking in the high grass and besides, we did not know yet who the owner of the beach was and if we were allowed to be there. We went up from the cooling shade to the sun exposed pavement on Kivukoni Road. We continued our walk towards the Lutheran Church. Vendors were seen along the pavement this day as well. Through the dense greenery we could see traces left from the historic use of the waterfront (figure 105). Innocent told us it was parts from the old docks that were in use when Kivukoni still was the harbor.



Figure 102. A coat was hanging from a tree, indicating that this is a popular meeting place.



Figure 103. Some people were using a skiff to row out in the water.



Figure 104. People walking along the shoreline.



Figure 105. Traces left from old dock reminds about the history when the waterfront was used as a harbor.

When we arrived at the marine police, we told Innocent to ask them in Swahili if we could go down to the beach to take photographs and to sketch. The police chief told us it was okay. However, they told us not to go far away along the beach, claiming it was not safe. We went down to the beach, but kept close to the marine police area. The first thing we noticed was the shipwrecks lying in

the sand. Solid waste was spread around the shipwrecks. Looking carefully in the sand, we could see small white crabs everywhere. They were coming and going through tunnels in the sand, sharing it with the solid waste. Large birds were walking along the shore looking for food (figure 106). Smaller birds were sitting in some trees. The cooling breeze was much more palpable here. As we observed the beach, we noticed how calm and peaceful it was. There were hardly any sounds from the traffic. We heard the faint sound of the church bell of the Lutheran Church.

After thanking the marine police, we walked past the restaurant facilities. Innocent told us it was called Mama Lishe and that it is a popular place in CBD for people to eat cheap lunch. A man was using a wheel barrow to transport items up and down the slope, which was one of the entrances to Mama Lishe.

We continued our walk and passed by the new yellow bus stop that was being constructed in front of Bustani ya Posta. Standing west of the new bus stop, we looked out towards the waterfront. We noticed that people were spending their time along the waterfront, in the shade of some trees and inside and around one of the larger shipwrecks that were stranded on the shore (figure 107). Laundry had been hung up in some trees. Some people seemed to be cleaning themselves up, and others had been cooking. It seemed as if they were actually living there. The environment did not look healthy.

Since it was becoming lunch time, we headed north along Maktaba Street to find a restaurant. We thanked Innocent for taking his time to guide us at Kivukoni and enlightening us further about the site.



Figure 106. Birds were looking for food along the shoreline.



Figure 107. People are using the shipwrecks as a place to cook and stay during the day.

NIGHT OBSERVATION WITH EMMANUEL

Since we felt insecure at some places along the waterfront during the day, we wanted someone to join us during observation after nightfall. We met up with Emmanuel Lazaro at the bus terminal at Posta, after a day of site observations at Kivukoni on a Saturday, the 5th of April. Emmanuel was one of the students that helped us to interpret during interviews. Since the sun had not set yet we paid a visit to Mama Lishe.

“I like this environment and the cool breeze from the ocean. The sea view is nice. What I don’t like is that the site is undeveloped. Our facilities for example do not have access to clean water. There is a well, but the water is salty so it can only be used for cleaning.”

Innocent Kabitina, age 47, teacher and worker at Mama Lishe.

A man working at Mama Lishe, Innocent Kabitina, joined our company (figure 108). We got a seat right in front of the fence that enclosed the area of Mama Lishe, facing the ocean. We bought a Serengeti beer each for 8000 TZS (about 36 SEK) and enjoyed the view and the company. A couple of men were playing pool after a day of work, before they were going home (figure 109). As the sun was setting, the lights from the port were illuminating the horizon. The ocean breeze was very pleasant. We remember thinking and discussing how beautiful Kivukoni can become through a development of the area.

Nightfall occurred around 7 pm. After finishing the beers we set out for a walk along Kivukoni Road. The first thing we noticed was the lack of lighting. The only areas that were illuminated were Lutheran Church and Hyatt Regency Dar es Salaam, The Kilimanjaro (figure 110). These areas created a contrast to the other parts of Kivukoni Road. Some vendors were selling food along the pavement. They had small lamps that illuminated the area around them. We bought grilled corn wrapped in corn leaves served with piri piri and lime. As the vendor continued preparing and grill corn in the light from the small lamp, he told us he sat there from around 7 pm to 10 pm when people are still present at Kivukoni Road.

We continued our walk towards the Kivukoni ferry terminal. There was a major queue of cars on Barack Obama Drive, waiting to depart the ferry. Emmanuel told us that people were still going home from work. We approached some youths sitting at a wall next to the terminal. Emmanuel asked them what they were doing there. One of them answered “making small business” and the other one said he was unemployed and was just there for the company. Saying goodbye to them, we decided to call it a night, and walked back towards Posta.



Figure 108. Innocent Kabitina, one of the workers that we interviewed at Mama Lishe, joined our company during the evening.



Figure 109. Some men were playing pool after a day of work in the CBD.



Figure 110. Hyatt Regency Dar es Salaam, The Kilimanjaro are one of the few areas that is illuminated along Kivukoni Road.



Figure 111. Map of existing buildings at the waterfront and along Kivukoni Road. Scale 1: 10 000/A3.

Mapping

The following section presents the mapped aspects of Kivukoni Waterfront.

ARCHITECTURE

The city center of DSM has been influenced with buildings from different eras which clearly can be observed along Kivukoni Road. The mixed architecture from the four different eras (Arabic, German, British and Tanzanian) gives the area a strong identity and makes it interesting. However, it causes a lack of architectural coherence.

The city was founded by the Arabs; however there is only one building that can be seen along Kivukoni Road from this time - the Tanzania Court of Appeal (figure 115). Between 1887 and 1919 the Germans controlled the city and built several buildings along Kivukoni (Wikipedia 2015b). The Lutheran Church was built in 1901 by the German missionaries (figure 114). It is one of the most well-known landmarks and tourist attractions in the city (Wikipedia 2015a). It has an impressive architecture and is an important part of the cultural heritage of DSM. Another building of important cultural value and important landmark is St. Paul Cathedral (figure 113), situated in front of the Zanzibar ferry terminal.

The marine police building, located in the waterfront area, was built during the British period. The most of the buildings along Kivukoni Road are from the modern times, 1961 until today, during Tanzanian governance. The restaurant facilities of Mama Lishe was built during the 21st century and is located in the waterfront area. Hyatt Regency Dar es Salaam, The Kilimanjaro has been renovated several times because of change of owner (figure 116). Other modern buildings that have a strong expression are for example the Utumishi building and the Terminal

with the Control Tower (figure 117 and figure 118).

Institutional buildings dominate along the Kivukoni Road. The only commercial buildings are the restaurant facilities of Mama Lishe, while the Hyatt Regency Dar es Salaam, The Kilimanjaro can be seen as partly commercial. There are no residential buildings adjacent to the area.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- The historic buildings are a part of the cultural heritage of DSM and create a strong identity to the area.
- The different eras have entailed a mixed architecture along Kivukoni Road that is interesting to look at; however, it lacks architectural coherence.
- Mainly institutional buildings and only one partly commercial building along Kivukoni Road.
- No residential buildings are adjacent to the waterfront.
- There are several landmarks that people can orientate themselves after in the city. The Lutheran Church is a major attraction among both local people and tourists.

LIST OF BUILDINGS

Nr	Name	Built around year
1.	St. Joseph Cathedral	1902 (1953-1955)
2.	Zanzibar Ferry (previously Customs and Jetty)	-1880
3.	Lutheran Church*	1901
4.	Mama Lishe	21st century
5.	Development house	1970
6.	Tanzania Court of Appeal (Ministry of Natural Resources and Tourism)	1880
7.	Marine Police	1933
8.	Hyatt Regency Dar es Salaam, The Kilimanjaro (previously Kilimanjaro Hotel)	1965
9.	High Court of Tanzania	1970
10.	Ministry of Foreign Affairs/Ministry of Justice	1970
11.	Central Statics Headquarters	1890
12.	Pillard portico	1890
13.	Surveys and Mapping Division	1890
14.	Commercial Court	1890
15.	Office of the Controller and Auditor General	1890
16.	Presidents office: Planning Commission	1890
17.	Administrative building of Ardhi house: Ministry of Lands and Urban Development	1970
18.	Utumishu	After 1961
19.	Ardhi house: Ministry of Lands and Urban Development	1970
20.	Ministry of Community Development	1970
21.	Kigamboni Ferry Terminal	After 1961
22.	Control Tower	21st century
23.	The New Bus Terminal	2015
24.	Fish Market	2000

*Building that is on the list of "Appendix 1: Protected Buildings, Sites and Conservation Areas in Dar es Salaam"

Figure 112. List of buildings that displays the name of the buildings and which year they were built. Source: Hoyle (2002, p. 119).



Figure 113. St. Joseph Cathedral.



Figure 114. Lutheran Church.



Figure 115. Tanzania Court of Appeal.



Figure 116. Hyatt Regency Dar es Salaam, The Kilimanjaro.

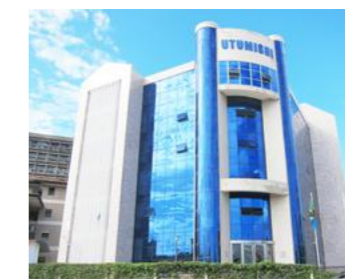


Figure 117. Utumishu.



Figure 118. Control Tower.



Figure 119. Map of existing vegetation. Scale 1: 10 000/A3.

VEGETATION

The waterfront is covered by more or less dense vegetation in the form of grass or groundcovers, shrubs and quite large trees. Trees we managed to identify were Neem tree (*Azadirachta indica*), False Ashoka tree (*Polyalthia Longifolia Pendula*), Indian almond (*Terminalia Catappa*) and African Tulip (*Spathodea campanulata*). There were also some palm trees, for instance Royal Palm (*Roystonea regia*).

The vegetation around the areas of the marine police and Mama Lishe is a lot sparser. A number of palm trees, shrubs and other tree species are found in these areas. Outside of these areas the vegetation is freely grown, which has entailed more or less dense parts. The vegetation stretches down to the beach. During high tide the ocean level reaches all the way up until it meets the grass.

The greenery of the waterfront limits its accessibility; only parts with less dense vegetation are accessible. Moreover, the large trees are obscuring the sea view. The dense vegetation also increases the insecurity of the waterfront and Kivukoni Road (figure 121). This is the reason why Kivukoni Road has been fenced off from the waterfront. Before the fence was initialized, criminals could easily hide in the greenery along the waterfront. We assessed that the current vegetation does not have any conservation values in particular. In addition, according to Urasa¹ Neem tree is an invasive and poisonous species that should be avoided in urban areas.

¹Anitha K. Urasa, registered architect and landscape architect at Design Solutions, interview 10th of April 2014.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- The waterfront is covered by more or less dense vegetation in the form of grass, groundcovers, shrubs and quite large trees.
- The existing greenery does not have any conservation values in particular.
- Dense vegetation is obscuring views, limiting the accessibility of the waterfront and increasing the insecurity of the waterfront and Kivukoni Road.



Figure 120. The sparsely vegetated area makes it possible to observe attractive views.



Figure 121. Dense vegetation acts as a physical and visual barrier as well as increases the insecurity of the waterfront area.

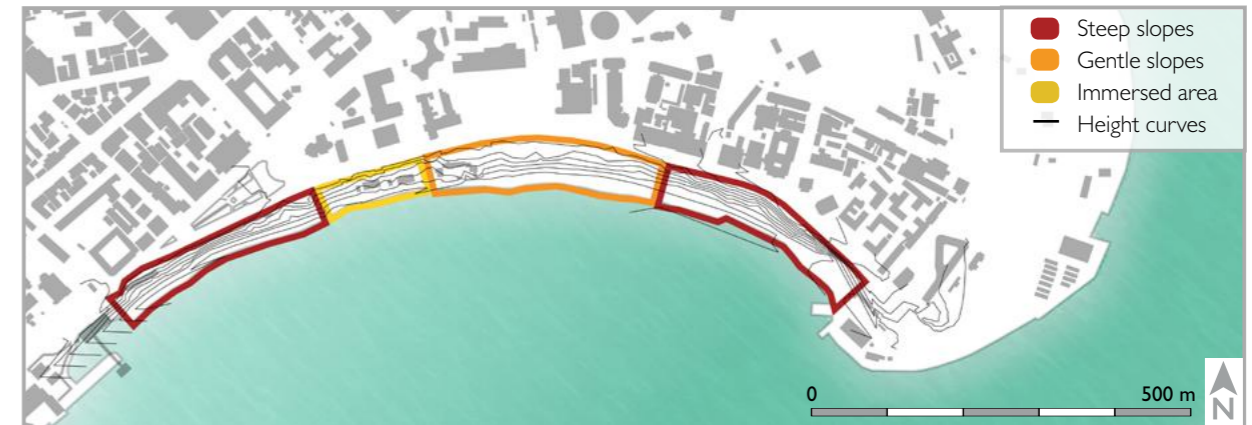


Figure 122. Map of existing topography. Scale 1: 10 000/A3.

TOPOGRAPHY

The waterfront tilts towards the ocean. Kivukoni Road is situated 7-9 meters above the beach, depending on the tide level. The gentlest slopes are situated in the middle of the waterfront, around the area of the marine police. From the west end of Mama Lishe towards the Zanzibar ferry terminal there are quite steep slopes. There are also steep slopes in the areas towards the Kivukoni ferry terminal (123). The entire area of Mama Lishe is immersed which creates a flat surface (figure 124), and a retaining wall is separating the area from Kivukoni Road. There are no stairs down to the facilities, only steep slopes which limits the accessibility.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- The waterfront tilts towards the ocean.
- Kivukoni Road is situated 7-9 meters above the beach, depending on the tide level.
- The steep slopes need to be addressed in order to create accessibility to the waterfront.
- It is important to consider the tide level when designing the area.



Figure 123. There are steep slopes in the area towards the Kivukoni ferry terminal.



Figure 124. The Mama Lishe area is immersed several meters below Kivukoni Road, creating a flat surface for the restaurant facilities.

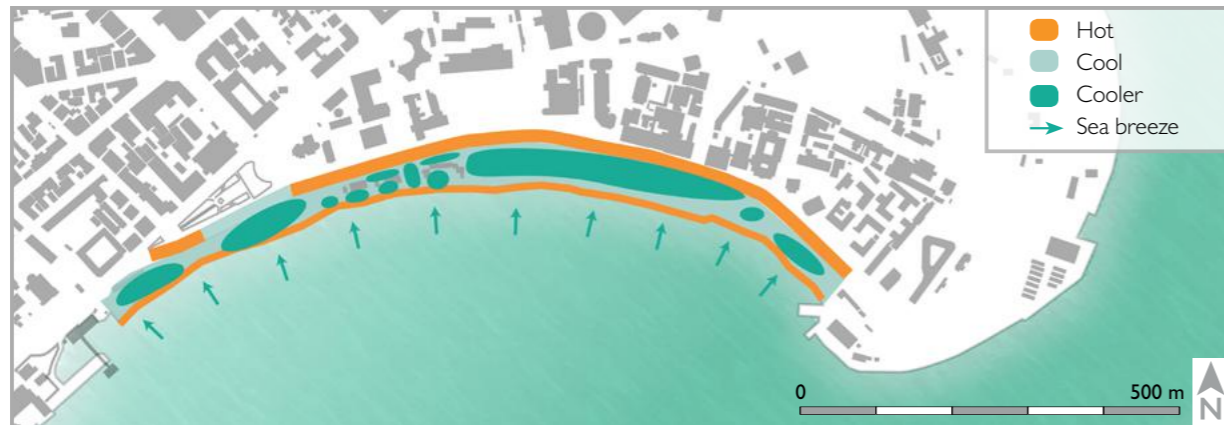


Figure 125. Map of existing microclimate. Scale 1: 10 000/A3.

MICROCLIMATE

The climate is very hot in DSM during daytime, especially in the middle of the day around 11 am and 3 pm. This is clearly noticed along Kivukoni Road and the shoreline, where there is no protection against the sun whatsoever (figure 126 and 127). The sea breeze cools slightly along the shore, which is appreciated by people working or visiting Mama Lishe. Depending on how dense the vegetation is along the waterfront there are areas that are more or less cool. There are some major trees right next to the walkway along Kivukoni Road that provide certain spots with shade, hence creating a cooler microclimate (figure 128). Vendors and homeless people are using these shaded spots to seek protection against the sun.



Figure 126. The sun exposed shoreline has a hot microclimate, but the sea breeze cools slightly.



Figure 127. An umbrella provide shade for the vendor at the sun exposed Kivukoni Road.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- Hot microclimate along Kivukoni Road and the shoreline.
- The sea breeze cools slightly along the shore.
- People are seeking protection against the sun beneath major trees located next to the walkway along Kivukoni Road.



Figure 128. Some large trees provide this area with shade, which has generated a popular meeting place.



Figure 129. Map of existing sounds. Scale 1: 10 000/A3.

SOUNDS

Sounds from the Lutheran Church, for instance the church bell and various concerts, were perceived as pleasant sounds. Other pleasant sounds were natural sounds created by birds and wind. The natural sounds could not be heard very often, since they were often drowned by the traffic sounds. We also perceived sounds from ferry departures and arrivals as pleasant. Interaction between people along Kivukoni Road was also perceived as pleasant sounds. We perceived sounds created by workers at restaurant business Mama Lishe as neutral. The traffic sounds were disturbing in general (figure 130).

- Pleasant sound**
 - Church
 - Bell and concerts
 - Natural sounds
 - Birds and wind
 - Ferry
 - Departures and arrivals
 - Interaction between people
- Neutral sound**
 - Restaurants
 - Workers
- Disturbing sound**
 - Traffic
 - A lot and very intruding
 - Less and not so intruding

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- Pleasant sounds from the Lutheran Church, natural sounds and ferry departures.
- Disturbing sounds from traffic along Kivukoni Road, which drowns most of the pleasant sounds.



Figure 130. Sounds from traffic along Kivukoni Road were disturbing.

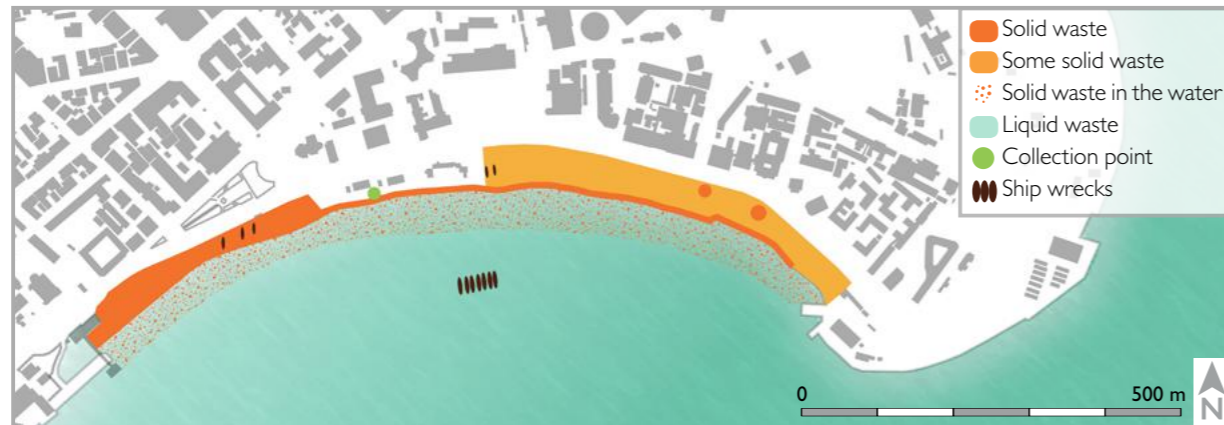


Figure 131. Map of solid waste. Scale 1: 10 000/A3.

SOLID WASTE

Solid waste and pollution are major issues, not only at Kivukoni Waterfront but the entire city. Solid waste is being produced by the vendors and many of the customers walking along Kivukoni Road are using the waterfront as a disposal site. However, since most vendors are selling vegetables, fruits and fish, most of the waste produced is organic.

Solid waste is washed up with currents and is littered along the entire beach as well as in the ocean (figure 133). The ocean is also polluted due to effluents from ships and untreated sewerage from the city which is being discharged right into the ocean (Ministry of Land and Human Settlements Development n.d., p. 23). Several shipwrecks have been dumped at the beach and some shipwrecks have been abandoned in the ocean.

The most littered area is the west part of the waterfront, from Lutheran Church to Zanzibar ferry terminal. Homeless people that are basically living in this area contribute to littering. There are also two spots by large trees at the east part of the waterfront that are littered, since people are often cooking there.

The Mama Lishe facilities had their own waste collection point (figure 132). Their waste was collected by Green Waste Pro Limited on a regular basis.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- Solid waste is produced by the vendors. However, most of the waste is organic and could be recycled.
- The waterfront is often used a disposal site by people walking along Kivukoni Road.
- Solid waste is washed up with currents and is littered all over the beach and in the ocean. The ocean is also polluted. Therefore, the waterfront is not suitable at all for swimming activities.
- Green Waste Pro Limited is collecting waste at Mama Lishe.



Figure 132. The waste collection point at Mama Lishe.



Figure 133. Solid waste is littered along the entire beach as well as in the ocean.

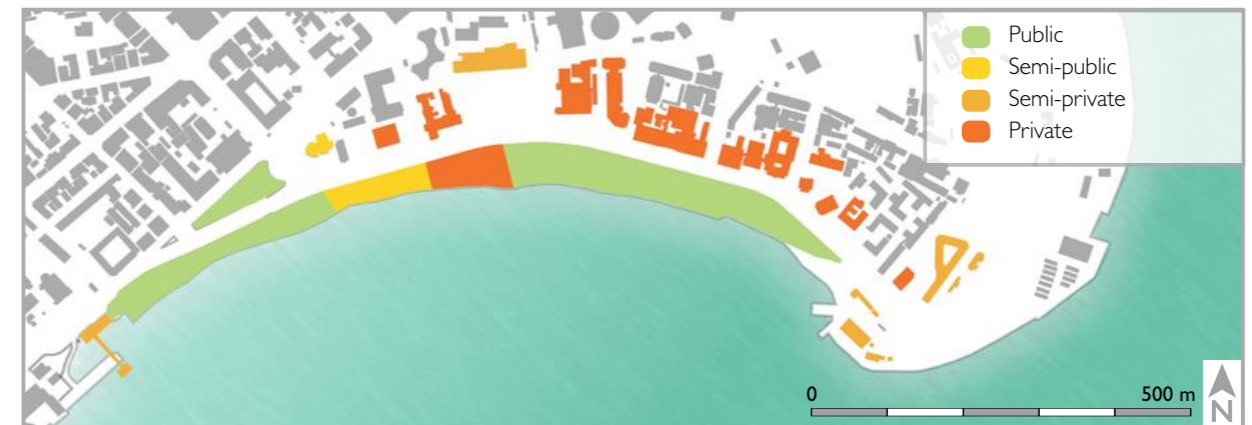


Figure 134. Map of private and public areas. Scale 1: 10 000/A3.

PRIVATE AND PUBLIC AREAS

The waterfront is a public space (an area open and accessible to everyone where there are no entrance fees or obligation to buy something), except from the Mama Lishe restaurant area that we perceived as semipublic (partly public, for instance a private institution offering some public services or facilities) and the marine police that is a strictly private (belonging to or concerning a particular person or group) area. The small park Bustani ya Posta, is a public space. We perceived the Lutheran Church as semipublic since it is open for everyone and there is no entrance fee. We perceived the hotel Hyatt Regency Dar es Salaam, The Kilimanjaro as semiprivate (partly but not completely private), since it provides public services and facilities for everyone that can afford them. Most buildings just north of Kivukoni Road are institutional and therefore private. Only people who work there or have a special errand have a reason to enter these buildings. We perceived the ferry terminals as semiprivate, since they are private businesses, and the only reason for going there is to buy a ferry ticket or depart the ferry.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- The waterfront is an overall public space, except from the areas belonging to Mama Lishe (semipublic) and the marine police (private).
- Most of the buildings just north of Kivukoni Road are institutional hence private.
- Bustani ya Posta is a public space. There are opportunities to create connections between the waterfront and Bustani ya Posta, which will make it possible to create a network of public spaces in the CBD.
- Kivukoni Road is a public space.

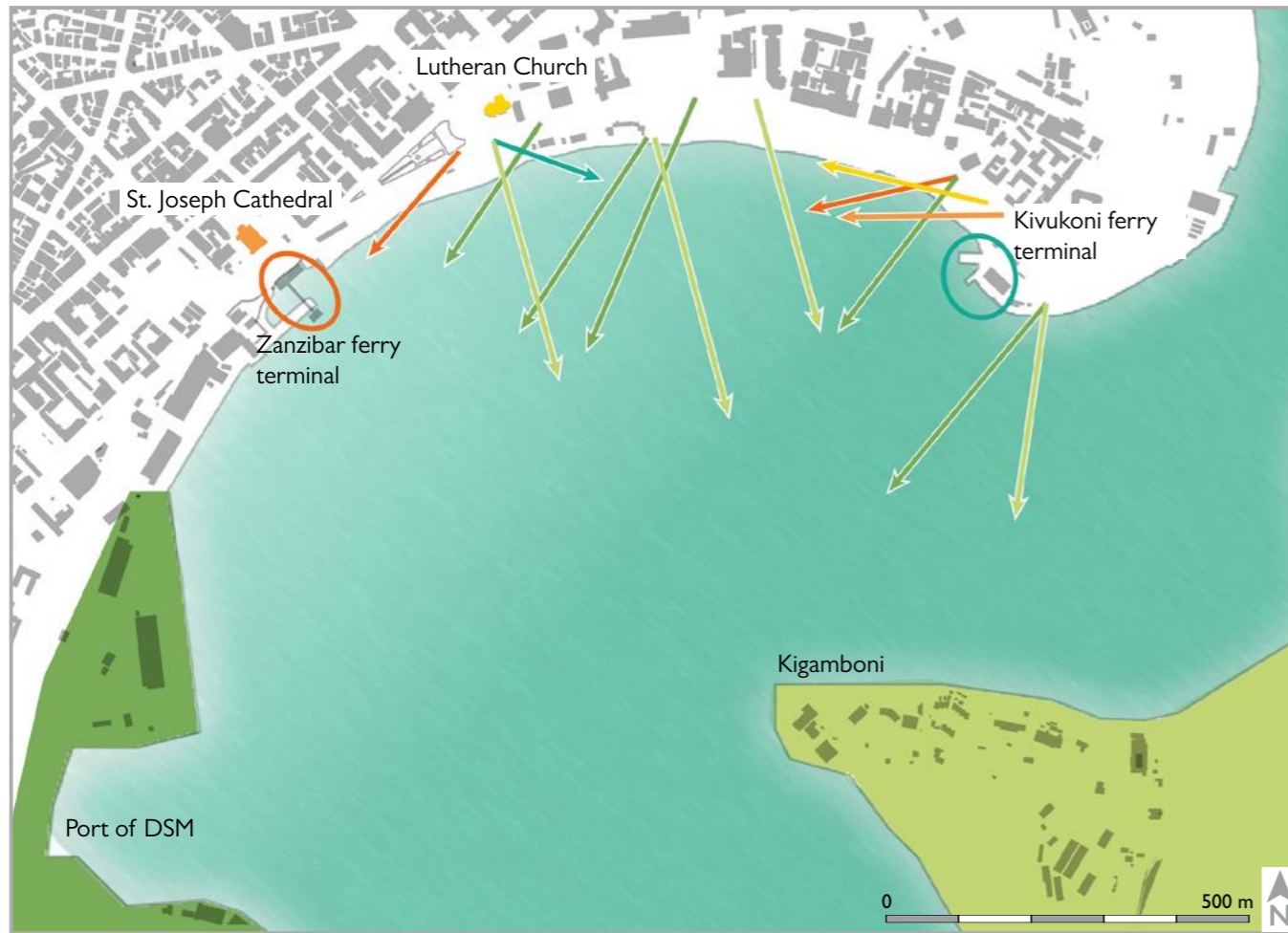


Figure 135. Analysis map of attractive views. Scale 1: 10 000/A3.

Analyses

The following section presents the analyses conducted at Kivukoni Waterfront.

VIEWS

Attractive views are obscured by dense vegetation which is covering the waterfront area. However, there are very attractive views where the vegetation is less dense. The views towards Kigamboni and the port of DSM can be seen from several spots along Kivukoni Road. Kigamboni and the port are illuminated during night time which makes the views even more spectacular. There are attractive views towards the Lutheran Church and St. Joseph Cathedral from the Kivukoni ferry terminal area. Appealing views can also be seen towards the ferry terminals on both sides of the waterfront. In general, the views can be enhanced and improved by removing some of the vegetation at the waterfront.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- Attractive views are obscured by dense vegetation.
- The views can be enhanced and improved by removing some of the vegetation.

- ➔ View towards Lutheran Church (figure 136)
- ➔ View towards St. Joseph Cathedral (figure 137)
- ➔ View towards Kigamboni (figure 138)
- ➔ View towards port of DSM (figure 139)
- ➔ View towards Kivukoni ferry terminal (figure 140)
- ➔ View towards Zanzibar ferry terminal (figure 141)



Figure 136. View towards the Lutheran Church.

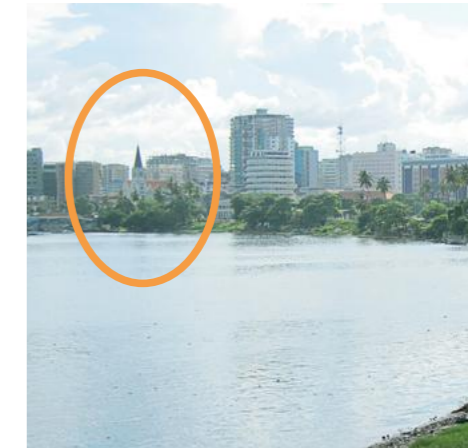


Figure 137. View towards St. Joseph Cathedral.



Figure 138. View towards the port of DSM.



Figure 139. View towards Kigamboni.



Figure 140. View towards Kivukoni ferry terminal.



Figure 141. View towards Zanzibar ferry terminal.

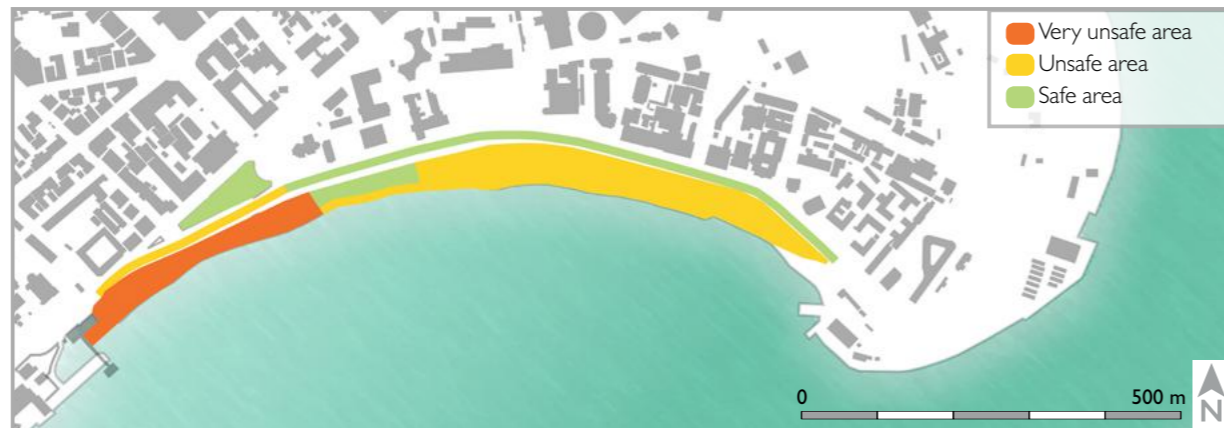


Figure 142. Analysis map of the safety. Scale 1: 10 000/A3.

SAFETY

This analysis has been based on how we perceived the safety along the waterfront, as well as the perceptions of users of the site and of the marine police. The areas around Bustani ya Posta, Kivukoni Road (from the Lutheran church to the Kivukoni ferry terminal), Mama Lishe and the marine police are safe for varying reasons. Bustani ya Posta and Kivukoni Road are safe because of the constant presence of people, that engage in social activities and optional activities. Mama Lishe is safe because it is fenced off from the rest of the waterfront and has guards. Kivukoni Road is also fenced off from the waterfront. The marine police help to improve the security of the entire site, since they are patrolling both the ocean and Kivukoni Road.

The waterfront area is perceived as insecure in general due to the dense vegetation and steep slopes. The beach area is perceived as insecure because there were homeless people idling in this area.

The most insecure area is along the waterfront from the west end of Mama Lishe towards the Zanzibar ferry terminal, since homeless people are basically living there. In addition, we did not feel safe walking along Kivukoni Road from the Lutheran Church towards the Zanzibar ferry terminal, due to the hustle and bustle and people approaching us, eager to sell tickets to the Zanzibar ferry. The Zanzibar ferry terminal area felt insecure for the same reason.

We only made two site visits during night time, both occasions accompanied by students from Ardhi. We would not have felt safe going to the site by ourselves after nightfall, since there is a lack of lighting and presence of people in the evening.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- Safe areas are where there is a presence of people engaged in recreational activities or informal businesses.
- Fences contribute to feeling safer. However, it is not a good long term solution to increase safety.
- The waterfront in general is perceived as unsafe due to dense vegetation and steep slopes.
- The beach area is unsafe because of homeless people idling in this area.
- The most unsafe area is located along the waterfront from Mama Lishe towards Zanzibar ferry terminal, since homeless people are basically living there.
- The marine police help to improve the security of the entire site.
- Lack of lighting and presence of people make the entire waterfront area unsafe after nightfall.

“Some people come to look at the harbor view and simply hang around. Some people come to play pool and have soda. It is very varying. It is people from offices and court, from morning to evening.”

Stella Jeremia, age 35, sells drinks at Mama Lishe. Optional and social activities occur at Mama Lishe.

“Kivukoni is a good place for making money. The streets are market places. A lot of people along Kivukoni Road.”

Krispino Raymond, age 38, street vendor.



Figure 143. Analysis map of social, optional and necessary activities. Scale 1: 10 000/A3.

ACTIVITIES

Mainly necessary activities occur along Kivukoni Road, since it is being used as a transportation stretch to and from the ferry terminals. Vendors are using the road as a market since many pedestrians are passing by. Some optional activities occur occasionally along this road, for instance interaction between the vendors and interaction between customers and vendors. Optional and social activities occurred at two informal meeting points along Kivukoni Road, where people came to relax in the shade and to converse. The meeting points are located under large trees that provide shade.

There are very few or no activities in the waterfront area (except from Mama Lishe area) due to inaccessibility and insecurity. Only a few people were walking along the ocean. We observed social and optional activities like people relaxing on the wall towards the ocean at the Kivukoni ferry terminal, people playing pool at Mama Lishe, and concerts in the Lutheran Church. Around Kivukoni ferry terminal mainly necessary activities occurred, since most of the people using the ferry are people going to and from work. Some optional activities occurred, like people using the ferry to visit specific beaches in Kigamboni. The Zanzibar ferry is dominated by optional activities.

As a conclusion, inaccessibility and insecurity as well as the fact that essential functions like seats, garbage bins and public restrooms are missing along the waterfront decreases its quality. As a result, mainly necessary activities occur.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- Mainly necessary activities along Kivukoni Road. Some optional activities.
- Few or no activities in the waterfront area due to inaccessibility and insecurity.
- Optional and social activities at Mama Lishe, Lutheran Church and Kivukoni ferry terminal.
- Inaccessibility and insecurity as well as the fact that essential functions are missing, decreases the quality of the waterfront.

“Ocean view. Toilets. Garden benches. Garbage bins. Clean area.”

Mathias Edward, age 30 and Enrick Braysoni, age 27, boda boda taxi drivers about what is missing at Kivukoni.



Figure 144. The boda boda taxi drivers had strong opinions and visions of Kivukoni. They see potential in the waterfront to become a recreational public space.

CITY STRUCTURE

The location of Kivukoni Waterfront is very strategic because of the closeness to the water and the central location in the city. As a result, many important nodes, landmarks, edges, paths and districts are found in this area.

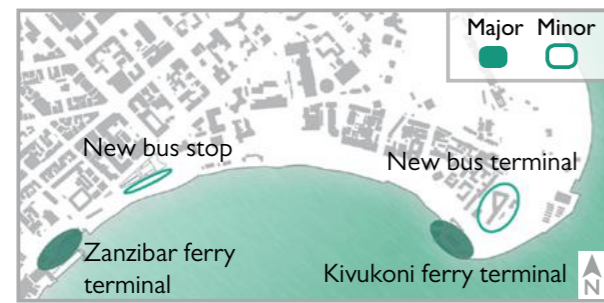


Figure 145. Analysis map of the nodes. 0 250 m

NODES

The major nodes are the ferry terminals, Zanzibar ferry terminal (figure 151) and Kivukoni ferry terminal. When the BRT system has been implemented there will be two new nodes, one in front of Bustani ya Posta where they are constructing a new bus stop, and one at the Kivukoni ferry terminal where the new bus terminal is being constructed.



Figure 148. Analysis map of the paths. 0 250 m

PATHS

Major paths are Kivukoni Road, Maktaba Street (figure 150), Luthuli Road and Samora Avenue. Minor paths are Sokoine Drive and Barack Obama Drive. Kivukoni Road was mainly occupied by pedestrians; the other paths were mainly occupied by motorized transport.

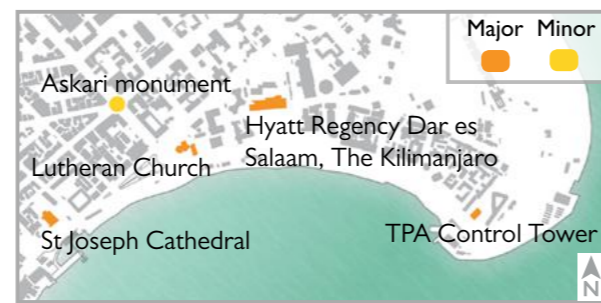


Figure 146. Analysis map of the landmarks. 0 250 m

LANDMARKS

The major landmarks along Kivukoni Road are Hyatt Regency Dar es Salaam, The Kilimanjaro, the Lutheran Church, TPA Control tower and St Joseph Cathedral. Askari Monument is a minor landmark located in the roundabout at Samora Avenue.

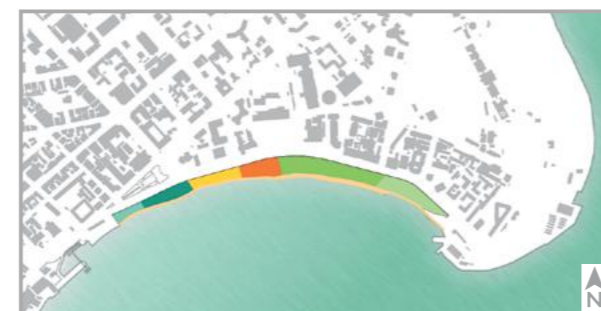


Figure 149. Analysis map of the districts. 0 250 m

DISTRICTS

We perceived seven major districts along the waterfront: The open littered area, The squatting area, The Mama Lishe area, The marine police area, The densely vegetated area, The sparsely vegetated area and The beach area. We perceived Bustani ya Posta as a minor district. It was difficult to perceive any distinct districts in the CBD, since it is an area with very mixed architecture.

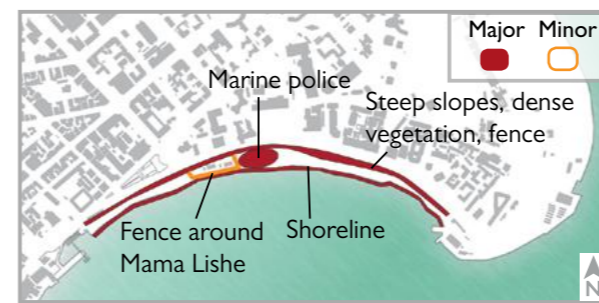


Figure 147. Analysis map of the edges. 0 250 m

EDGES

Major edges are the marine police and the steep slopes together with the dense vegetation and fence on the Kivukoni Waterfront (figure 152). The shoreline is also a major edge, because of the border between land and ocean. The fences around Mama Lishe were perceived as minor edges. All these edges act as barriers today.



Figure 150. Maktaba Street is one of the most important entrances to the waterfront.

Figure 151. The Zanzibar ferry terminal is a major node.



Figure 152. Steep slopes in combination with dense vegetation and the fence is one of the major edges which limits access to the waterfront.

WHAT TO CONSIDER IN THE REMAKING OF THE WATERFRONT

- The ferry terminals, Hyatt Regency Dar es Salaam, The Kilimanjaro and the Lutheran Church are important nodes and landmarks that activities and functions can be connected to in the waterfront design.
- The major edges need to be addressed to create accessibility to the waterfront.
- Kivukoni Road, Maktaba Street and Luthuli Road are important major paths. Maktaba Street and Luthuli Road terminates at Kivukoni Road, which will make them important entrances to the waterfront.

SWOT-analysis of Kivukoni Waterfront

The following SWOT-analysis is a synthesis of the mapping and analyses conducted at Kivukoni Waterfront. It summarizes the key prerequisites and challenges of the site. The SWOT has been divided into five aspects: political, physical, contextual, social, and environmental. The political aspects include decisions, stakeholders and future plans. The physical aspects comprise current land use, vegetation and topography as well as the location of Kivukoni. The contextual aspects regard every aspect in the surroundings that directly or indirectly affect the waterfront. Activities that take place within the area represent the social aspects. The environmental aspects include the climate, biodiversity and sounds.

POLITICAL ASPECTS

PHYSICAL ASPECTS

CONTEXTUAL ASPECTS

SOCIAL ASPECTS

ENVIRONMENTAL ASPECTS

STRENGTHS

POLITICAL ASPECTS

- The area is earmarked as a public space in a map of future land use in the *Dares Salaam Central Area Redevelopment plan*.
- The new master plan states that the area should be developed as a public space.
- All stakeholders agree that the waterfront should be developed into a public space for recreation and tourism.
- IMC wants the inhabitants to be involved in the design proposal.

PHYSICAL ASPECTS

- Optimal location: in the CBD, by the Indian Ocean, close to the port of DSM, close to major nodes and landmarks, close to residential areas and work places in the CBD and Kigamboni.
- Attractive views towards the port, Kigamboni, Lutheran Church and St Joseph Cathedral.
- Elongated area which is easy to access from several locations including Maktaba Street, Luthuli Road and Barack Obama Drive.
- The new public transport (BRT) will make it easy to reach the site from different parts of DSM.
- The beach area is lower than Kivukoni Road which reduces traffic disturbances.
- The restaurant facilities of Mama Lishe indicate that there is a request for this type of business.

CONTEXTUAL ASPECTS

- The historic buildings that are adjacent are a part of the cultural heritage of DSM from colonial time which creates a strong identity within the area.
- The mixed architecture is interesting to look at and there are several landmarks to orientate oneself after.

SOCIAL ASPECTS

- People want to be able to access the waterfront, and use it for recreational purposes. Many users of the site see a large potential to develop it.
- A constant presence of people along Kivukoni Road during work hours increases safety.
- Different target groups moving along Kivukoni Road and visiting Mama Lishe.
- Social activities at Mama Lishe, Kivukoni Road, Bustani ya Posta and Kivukoni ferry terminal indicate that there is a need for public spaces where people can meet and socialize.
- The presence of vendors along Kivukoni Road makes the area safer.
- Workers at Mama Lishe feel a responsibility for the waterfront and want to maintain it. They have made clean-ups along the beach on several occasions.
- Workers at Mama Lishe have been educated by a local NGO.
- The marine police patrol the ocean, the beach and Kivukoni Road which increases safety.
- The private company Green Waste Pro Limited collects waste within the area and there is a collection point for solid waste at Mama Lishe.

ENVIRONMENTAL ASPECTS

- Sea breezes create a cooler microclimate.
- The greenery along the waterfront contributes to biodiversity. During observations we observed several bird species, butterflies, crabs and fish.
- Characteristic sounds: church bell, concerts, ferries, ocean waves, people conversing.
- The BRT will contribute to reducing emissions and probably also congestions.

WEAKNESSES

POLITICAL ASPECTS

- No stakeholder is working actively to develop Kivukoni. IMC has expressed that plans exist, but they are not working on these for the time being.
- The laws and regulations of informal businesses are not clear.
- Poor SWM in DSM in general.

PHYSICAL ASPECTS

- Poor and/or no access to the area due to physical barriers including the fence, the wall, steep slopes, dense vegetation and the marine police facilities.
- Visual barriers along the waterfront such as dense vegetation, the wall and the fence.
- No crosswalks along Kivukoni Road and existing traffic island means that the road is difficult to cross which delimits access to the waterfront.
- Essential functions and facilities are missing: seats, public restrooms, shelter against wind/sun/rain, garbage bins, recycling stations, proper facilities for restaurant business, and lighting.
- The tide is a challenge; the waterfront is to be used during both low and high tide.

CONTEXTUAL ASPECTS

- Mixed architecture means there is no common vision for the CBD. New developments do not consider the local context which means that the CBD lacks architectural coherence.
- Few residential areas and commercial businesses in the CBD pose desertion during evenings and weekends.
- Mainly institutional businesses along Kivukoni Road and no commercial businesses.
- The design of Kivukoni Road is monotone.

SOCIAL ASPECTS

- Insecure areas along the waterfront due to crime and vandalism.
- Squat establishments and homeless people are living in the area which contributes to insecurity.
- Desertion during evenings and weekends in the CBD exacerbates insecurity.
- Busy traffic along Kivukoni Road in combination with no crosswalks and no adaption to disabled pose an unsafe road environment.
- Mama Lishe restaurant facilities are of extremely poor standard.

ENVIRONMENTAL ASPECTS

- The entire waterfront is littered of solid waste and abandoned shipwrecks.
- Untreated wastewater discharges and effluents from ships are polluting the water.
- Erosion occurs due to wind and water.
- Absence of trees along Kivukoni Road creates a hot microclimate.

OPPORTUNITIES

POLITICAL ASPECTS

- Inspire and engage stakeholders actively in the site.
- To collect rent from the vendors that can be used for maintenance costs.

PHYSICAL ASPECTS

- Create a new meeting place and landmark for all inhabitants of DSM including tourists and visitors.
- Optimize public access.
- Relocate the marine police.
- Remove visual barriers and enhance views towards the port, Kigamboni and historic buildings.
- Attract the people moving along Kivukoni Road to the waterfront.
- Take advantage of the size of the area which can host a broad variety of activities and businesses.
- Connect and integrate the waterfront with the ocean, existing city structure and adjacent buildings.
- Introduce missing functions and facilities.
- Make it easier to cross Kivukoni Road in order to optimize accessibility to the waterfront.
- Upgrade existing and create new restaurant facilities.

CONTEXTUAL ASPECTS

- Introduce new businesses that the CBD is lacking e.g. commercial businesses such as shops, kiosks, cafes, restaurants and pubs.
- Establish connections to the CBD.
- Highlight the cultural heritage by enhancing the historic buildings.
- Add crosswalks along Kivukoni Road to increase safety for pedestrians and optimize access to the waterfront.

SOCIAL ASPECTS

- Support the local business by creating formal markets like food markets.
- Create job opportunities.
- Create educational opportunities about the site and its history.
- Create cultural activities such as events and arts and crafts exhibitions.
- Create awareness about SWM and recycling.

ENVIRONMENTAL ASPECTS

- Promote biodiversity by planting native species and reduce the spread of invasive plant species.
- Remove and replant existing plant species in order to reduce project costs.
- Create comfortable microclimate by providing protection from sun and rain.

THREATS

POLITICAL ASPECTS

- Lack of resources for funding the waterfront project.
- Lack of resources for funding maintenance.
- IMC do not intend to develop the waterfront for public use exclusively.
- If the government consider Kivukoni more appropriate for other than public use its current land status might change.
- Private investors only interested in earning money hence ignoring to support local business and consider the local context.
- Stakeholders might have different ideas and opinions on how the waterfront should be designed.
- No improvements of the SWM.

PHYSICAL ASPECTS

- The closeness to the ocean poses a certain risk of drowning accidents.

CONTEXTUAL ASPECTS

- New developments in CBD that do not consider the local context might distort the cultural heritage of DSM.
- No new residential housing or commercial businesses in the CBD means it will remain deserted in evenings and weekends.
- The BRT and private traffic along Kivukoni Road will entail a busy and unsafe road environment.

SOCIAL ASPECTS

- Insecurity might still remain an issue since urban poverty is a major issue in DSM in general.
- Risk of crime and vandalism.
- The new waterfront might become a place that only people of high economic status use, which will increase segregation.

ENVIRONMENTAL ASPECTS

- Exploitation of the waterfront may cause a vulnerability to erosion and flooding.
- Exploitation can decrease the existing biodiversity.
- A new public green space can increase littering and pollution.
- No improvement in sewage treatment will cause further pollution and degrade the beach and marine environment.
- If no interventions are undertaken, Kivukoni Waterfront will be degraded further which delimits future development opportunities.
- Disturbances from traffic along Kivukoni Road.



REMAKING THE WATERFRONT

DESIGN PROPOSAL

Chapter seven presents the design proposal. It begins by describing the vision followed by the design program, which is a synthesis of the previously presented mapped aspects and analyses. Following section demonstrates the design concept based on three design keys: connect, concentrate and commit. Next section presents the design proposal, starting by displaying the illustration plan in order to understand the overall design. Further, we explain what material that has been used in the design and how we managed the height differences. The next section provides a detailed description of the destinations and their parts along the waterfront, explaining the design, what activities they host and how the design keys have been applied. This section shows the visualizations: cross-sections, perspectives and details of the illustration plan. The chapter ends by outlining the plant selection for the new waterfront.

VISION

Our vision is to create a new public city park and vibrant meeting place that does not exist today, through a holistic and sustainable design. Kivukoni will be transformed into a landmark and the front of DSM by creating a strong identity. The waterfront design will embrace the local context and highlight the cultural heritage of DSM by enhancing important historic buildings. A flexible design will offer a wide variety of activities and mixed uses which attracts and meets the needs of different target groups e.g. inhabitants of DSM, visitors and tourists. The city park will feature interaction between people and activities like sitting down, relaxing, having a meal or a drink, playing, walking along the ocean, souvenir shopping, watching ships pass by in the bay, watching the sunset, enjoying the ocean breeze and hearing the rippling sound of waves. Kivukoni will host different means of coming close to the ocean. Creative programming and smart use of amenities will provide protection from inclement weather, ensuring that the waterfront can be used at all weather conditions. People will be able to actively engage in the site in different ways including events, markets, exhibitions and information centers. The design will support local businesses as well as create new job opportunities. Kivukoni Waterfront will be a site designed for people. It will be a healthy meeting place which will benefit well-being of people.

DESIGN PROGRAM

The following design program was based on the guidelines formulated by PPS, the SWOT-analysis of Kivukoni, and the conclusions of the first and second work stage. The design program for the waterfront is as follows:

- 👉 Optimize the accessibility to the area for everyone, including people with disabilities.
- 👉 Optimize public access.
- 👉 Increase safety.
- 👉 Enhance and improve the existing strengths: views, the ocean, sea breeze, landmarks, nodes, historic buildings, social activities and the restaurant business.
- 👉 Encourage pedestrians and discourage vehicular traffic.
- 👉 Connect the waterfront to its surroundings and the existing city structure.
- 👉 Introduce new functions e.g. seats, shelter against rain/sun/wind, public restrooms, garbage bins, recycling stations.
- 👉 Support local business by creating formal markets for the informal activities.
- 👉 Develop cultural activities and values, such as markets and arts and crafts exhibitions.
- 👉 Create new job opportunities.

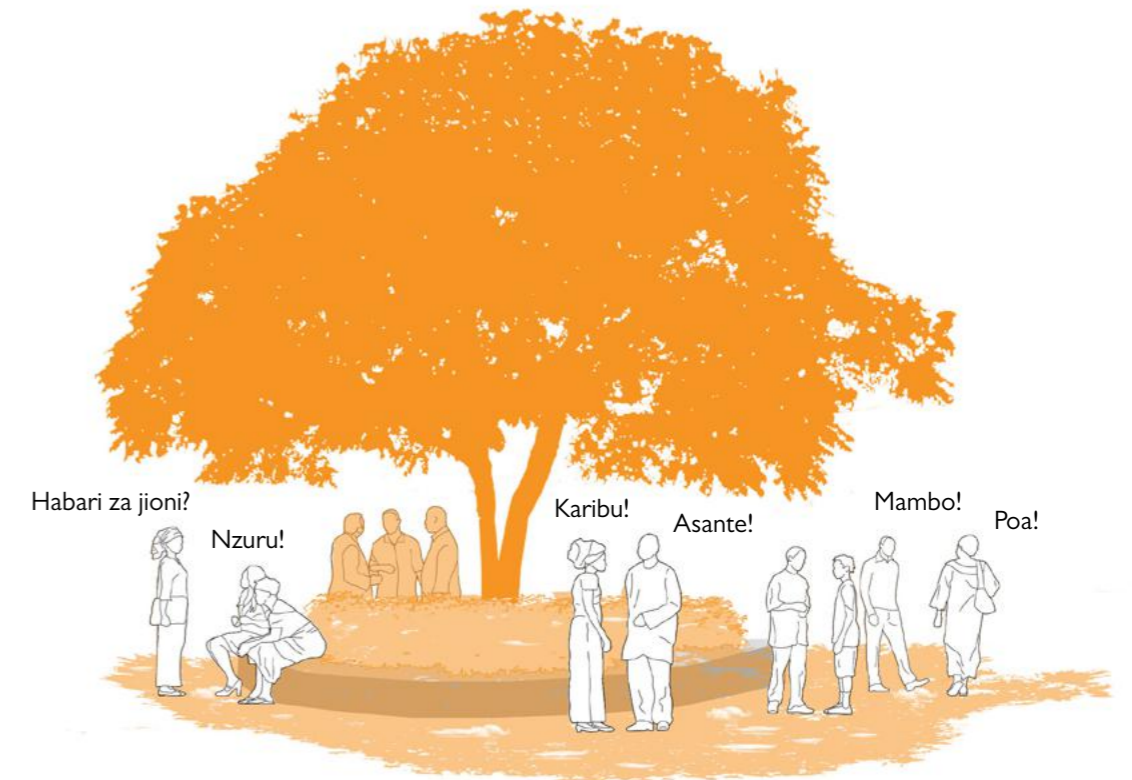


Figure 153. Our vision is to transform Kivukoni Waterfront into a public city park and vibrant meeting place where people can interact and socialize.



Concept – Connect, Concentrate, Commit

In order to implement the vision and design program we created a concept for the waterfront design. We based the concept on the fact that the waterfront is partly unutilized and isolated today; hence we needed a concept that helped us to connect the waterfront to its surroundings and define what activities and functions that will attract most visitors. The concept was based on three design keys which are as follows:

CONNECT

The first design key is to **connect** the waterfront, physically as well as visually, to its closest surroundings and the city structure of the CBD. Figure 156 outlines how this design key has been applied to each destination. The following elements will be connected:

WATERFRONT WITH CBD

The design should connect the waterfront to the CBD (figure 154). This will be achieved by suggesting some commercial businesses along the waterfront hence connecting it to the existing commercial land use of the CBD. It will also be achieved by integrating the waterfront with the existing city structure by connecting new walkways to existing paths.

NODES

Important nodes around the waterfront should be connected by the creation of new straight walkways that will act as shortcuts (figure 154). The Zanzibar ferry terminal and the Kivukoni ferry terminal are two major nodes situated close to the waterfront. In the near future there will be two new important nodes; the new bus stop at Bustani ya Posta and the new bus terminal east of the waterfront. Since numerous people are moving between these major nodes they will be connected through straight walkways that will provide clear physical and visual connections between the nodes.

WATERFRONT WITH PATHS

The waterfront design and its new walkways should be connected to existing paths (figure 154). Major paths that terminate at Kivukoni Road are Maktaba Street and Luthuli Road. The majority of visitors will enter the waterfront area at the junctions between Kivukoni Road and Maktaba Street as well as Kivukoni Road and Luthuli Road. It is important to create clear entrances in these junctions. Moreover, it is important that new suggested walkways are connected to the existing walkway along Kivukoni Road.

WATERFRONT AND INDIAN OCEAN

The waterfront should be connected with to Indian Ocean (figure 154). The waterfront design should make it easy to come close to the ocean and experience the ocean view, the ocean breeze and the rippling sound of waves as well as watch ships pass the harbor.

WATERFRONT WITH BUILDINGS

The suggested activities will be connected to important buildings along Kivukoni Road, for instance the Lutheran Church and Hyatt Regency Dar es Salaam, The Kilimanjaro (figure 154). In addition, the buildings that are established at the waterfront today (Mama Lishe and the marine police) will have a connection to the new waterfront design.

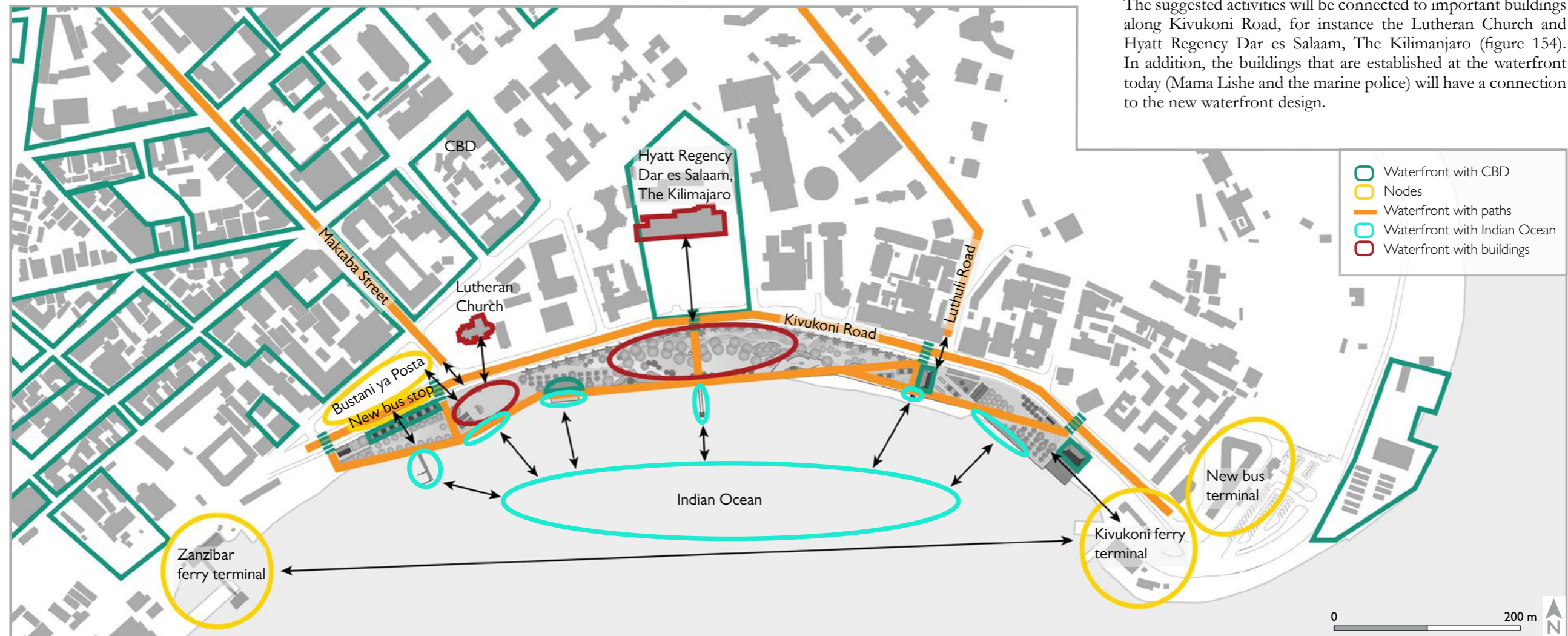


Figure 154. The map shows how the waterfront will be connected to its surroundings. Scale 1:5000/A3.

CONCENTRATE

The second design key is to **concentrate** visitors to specific destinations with unique functions and activities (figure 155). The destinations in our case refer to creating parts of different characters along the waterfront. The destinations will be the main attractions and meeting places. Each destination will provide opportunities for unique activities and experiences. The destinations will be multifunctional in order to attract different target groups. Visitors will be able to orientate themselves easily along the waterfront through the destinations. Figure 156 outlines how this design key has been applied by explaining what functions and activities that will act as main attractions in each destination.

COMMIT

The third and final design key is to support local businesses as well as allowing people to **commit** in the culture and history of the site (figure 155). This will be achieved by suggesting activities such as markets, exhibitions, information centers, games, events and ceremonies. The committing activities will enable interaction between people: personnel and customer, performer and audience. The visitors will not only be using Kivukoni Waterfront as a place for passive relaxation and observation, they will be given the opportunity to commit actively in the site. Supporting local businesses means formalizing the informal businesses that occur along Kivukoni Road today by transforming them into formal food markets. This gives the vendors a chance to continue to sell their commodity and committing in Kivukoni from a business perspective. New facilities for commercial business such as small shops, café and restaurant will provide new employment opportunities. Figure 156 explains how this design key has been applied in each destination.

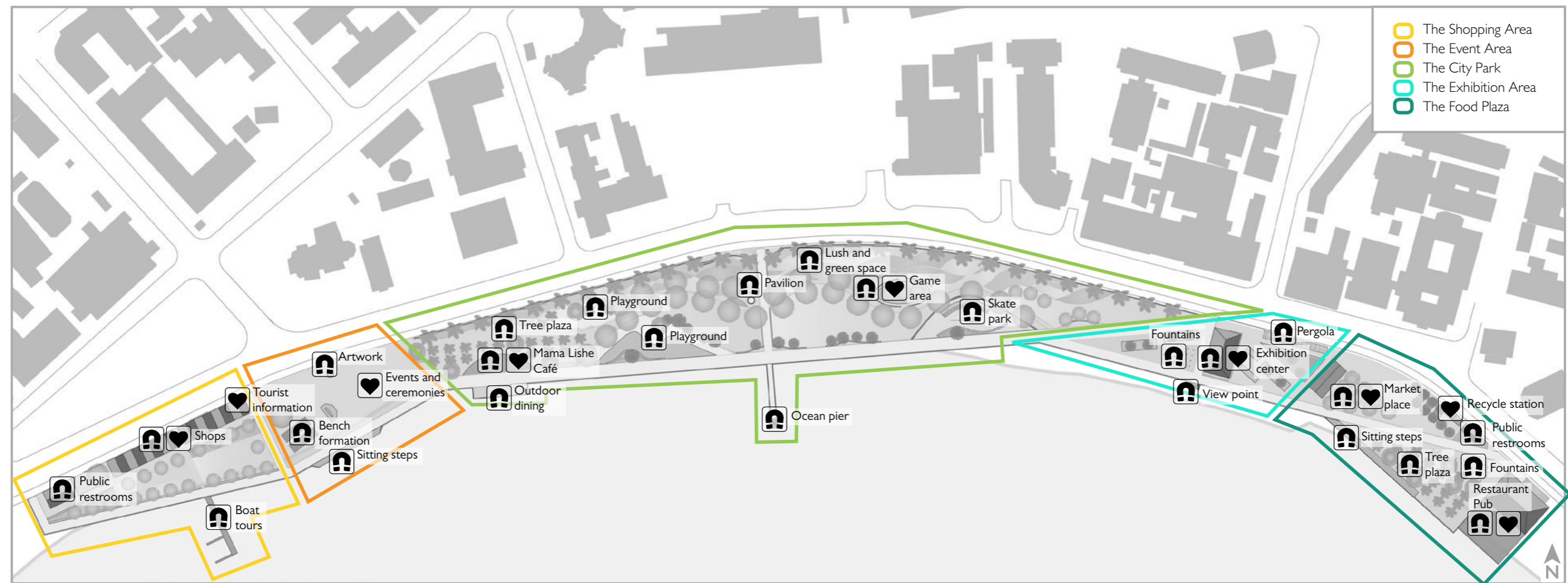


Figure 155. The map shows the five main destinations: The Shopping Area, The Event Area, The City Park, The Exhibition Area and the Food Plaza which have unique activities that will attract visitors. The symbols are showing which functions that represent concentrate and which functions that represent commit. Scale 1:2500/A3.

DESTINATION	CONNECT	CONCENTRATE	COMMIT
The Shopping Area	Commercial activities and public restrooms provide services for people arriving/departing with the BRT at the new bus stop. Boat tours to smaller adjacent islands connect the waterfront with the harbor and Indian Ocean. An elongated bench facing the ocean provides a visual connection to the ocean.	Commercial businesses. Boat tours. Public restrooms.	Tourist information. New job opportunities in the shops.
The Event Area	The unprogrammed space can be used for outdoor ceremonies by the Lutheran Church. The unique bench formation connects visually to the benches within the church and help highlight the historic heritage. The open character of the destination, a crosswalk at Kivukoni Road and a clear walkway towards the beach promenade optimizes physical connections to Kivukoni Road and Maktaba Street. Artwork creates an eye catcher for people arriving from Maktaba Street. The open character of the destination creates clear visual connections to the ocean, harbor and Kigamboni for people arriving from Maktaba Street. Sitting steps towards ocean connect the waterfront with the Indian Ocean.	Unique bench formation. Artwork. Events and ceremonies. Sitting steps towards ocean.	Engage in events and ceremonies including concerts, church ceremonies, festivals, food market, speakers corner. People who rent the space for arranging events can contribute to maintenance costs of the site.
The City Park	The City Park is connected to the hotel business of Hyatt Regency Dar es Salaam, The Kilimanjaro and provides an attractive green space for its customers. An ocean pier creates physical and visual connections to the ocean. Crosswalk at Kivukoni Road and a straight walkway towards the ocean pier connects the path with the waterfront both physically and visually. Café business connected to the former restaurant businesses of Mama Lishe situated in this area. The café will provide services for among others the working people of CBD. The protruded outdoor dining connects waterfront with the Indian Ocean.	Playground. Game area. Skate park. Pavilion. Ocean pier. Large and lush green space. Mama Lishe café. Protruded outdoor dining towards ocean. Tree plaza. Shading walkway.	Participate in active activities like board games, card games, children's play and skating. New job opportunities at the café.
The Exhibition Area	The exhibition activities connects to the adherent historic buildings. Crosswalk and straight walkway towards the view point connects the waterfront with Kivukoni Road and Luthuli Road. View point towards ocean connects waterfront with the Indian Ocean.	Arts and crafts exhibitions. History exhibitions. Fountains. Pergola with climbing plant and seats towards Kivukoni Road. View point.	Learn about the history and culture of the site. Participate in exhibitions.
The Food Plaza	The unprogrammed market space is located towards Kivukoni Road, and has an open character which create physical and visual connections for people walking along Kivukoni Road. The restaurant business provides services for people arriving/departing with the Kivukoni ferry terminal. Sitting steps towards ocean connect the waterfront with the Indian Ocean.	Purchasing and selling fruit and other edibles. Food market. Public restrooms. Restaurant/pub. Tree plaza. Fountains. Sitting steps towards ocean.	Vendors can engage in the site by selling locally produced food which attract visitors, and by paying rent which can be used for maintenace costs of the site. Recycling station provide oportunitites for taking responsibility to keep the site clean. New job opportunities at the restaurant. Local bands can have performents in the restaurant.

Figure 156. The table outlines how each design key has been applied to each destination.

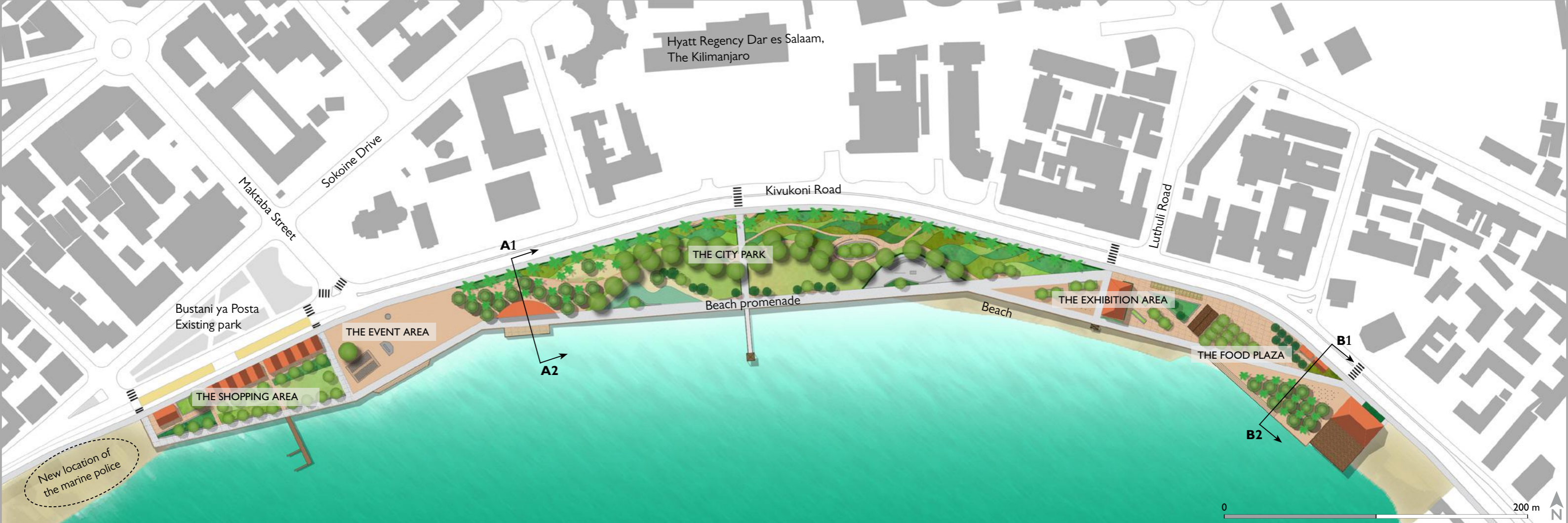


Figure 157. The illustration plan of the design proposal. The design consist of five main destinations: The Shopping Area, The Event Area, The City Park, The Exhibition Area and the Food Plaza as well as a beach promenade which acts as a spine that connects the destinations and creates continuity. The design language has been inspired by the organic shapes of the movement of the ocean and the strict shapes of the urban landscape of CBD. Scale 1:2500/A3.

The Design

The text that follows outlines the main ideas of the waterfront design.

DESIGN LANGUAGE

The overall design structure and the division of the destinations were developed based on the design key *Connect*. Linking the desired new path network along the waterfront to the existing paths resulted in an overall design structure. Starting from this design structure, we utilized the spaces between the paths for the destinations. The shape of the destinations were based on both the new path network but also existing block structures. For example, the shape of The Shopping Area is the inverted shape of Bustani ya Posta.

The design language consists of both strict and organic shapes. The strict shapes was inspired by the urban city structure and the organic shapes of the ocean waves. The west and east end of the waterfront have strict shapes and hard surfaces to a higher extent than the central part. The strict ends are connected by the central waterfront part of organic shapes, acting as a connecting green tissue.

FIVE MAIN DESTINATIONS

There are five main destinations along the waterfront: The Shopping Area, The Event Area, The City Park, The Exhibition Area and The Food Plaza. The destinations in turn consist of smaller parts.

THE BEACH PROMENADE

The beach promenade acts as the waterfront's spine by keeping the design together and is vital for creating continuity along the entire waterfront. It helps to connect the destinations and create close connection to the ocean as well as a clear view of the waterfront. The beach promenade has also been important for connecting major nodes such as the ferry terminals and the new bus stop. Compared to the walkway along Kivukoni Road the beach promenade creates a shorter and straight walkway which optimizes visual and physical connections between these nodes. The stretch from The Event Area to The Exhibition Area is seven meters wide, and the remaining parts are five meters wide.

FIVE MAIN ENTRANCES

There are five main entrances to the waterfront consisting of crosswalks at Kivukoni Road connected to straight walkways which extend to the beach promenade. The walkways are five meters wide. The main entrances make it easy to cross Kivukoni Road and to access the waterfront and create strong physical and visual connections to the beach promenade. Two of the crosswalks are situated in adherence to the new bus stop and have been suggested in the BRT design, while the remaining three are suggested new crosswalks.

SUSTAINABILITY

The new waterfront has a sustainable design, in terms of making a careful selection of plants, trees and materials that will work in a coastal and urban environment. For instance, we avoided using metal, since it would rust from the salt winds. Keeping the greenery as the majority part of the waterfront and reducing the amount of hard surfaces means that storm water will be able to infiltrate and that biodiversity is promoted. The design also promotes biodiversity by using a wide range of plant species and using mainly native species. Another important aspect regarding ecological sustainability was to avoid exploiting the waterfront to a high extent. Therefore, we decided to only exploit the existing green area, as well as some parts of the beach to gain a close contact to the ocean. When the tide is low parts of the beach will be visible. The idea is that the new green area will compensate for the green area that was exploited, which will preserve the biodiversity of the waterfront. The sea wall creates a robust design that withstands coastal erosion and manages the tide. The waterfront design contributes to social sustainability by creating new meeting places and new urban services which benefit the well-being of people. The design is modern but still preserves the cultural heritage of DSM by enhancing historic buildings which promote tourism that in turn contribute to economic sustainability.

LOCAL MATERIAL

Promoting locally produced materials and featuring a Tanzanian character upon the site was important in the design. The material should also resist the harsh climate. Following are different materials and furniture commonly used in urban and coastal areas in DSM and Zanzibar that we have been inspired by and used in our design: Tanga Stone (figure 158), concrete pavers (figures 159 and 160), coconut wood, thatched roof (figure 161), white concrete walls, stone coated steel roofing (figure 162), and white umbrellas (figure 163). All of the furniture is permanent; to create a robust and resilient design that better withstands vandalism (figure 164).



Figure 158. Tanga Stone. Photo: © Mina Karlsson and Emelie Maniette.

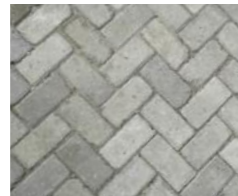


Figure 159. Grey concrete pavers.



Figure 160. Beige concrete pavers.



Figure 161. Thatched roof. Photo: © Mina Karlsson and Emelie Maniette.



Figure 162. Stone coated steel roofing.



Figure 163. White umbrellas.



Figure 164. Permanent furniture better withstands vandalism.

MANAGING HEIGHT DIFFERENCES

The height differences had to be managed to make the site accessible. In principle, they can be addressed in two ways, either by creating terraces or by creating a quayside hence elevating the area. We decided to create a quayside, for several reasons. Firstly, we want to minimize height differences in order to achieve a waterfront that is easy to access and overview for everyone hence reducing the risk of crime and promoting safety. Secondly, we want to create a continuous beach promenade that connects to Kivukoni Road at several points, which would not be possible if creating terraces. Thirdly, we want to establish physical as well as visual connections between the waterfront and the CBD. Finally, since we want to enhance views, among others towards adjacent historic buildings, it is easier accomplished by elevating the waterfront. Moreover, we wanted to create a resilient design that withstands coastal erosion and the harsh coastal climate and that can be used both during high and low tide. As a conclusion, the main reasons for elevating the area are that we want the waterfront to be easy to access and overview, to become a part of the existing city structure hence integrated with the CBD, and to be resilient. The waterfront has been elevated with the help of a retaining wall. We were inspired by from the sea wall at Forodhani Park.

Figure 165 and 167 are cross sections displaying the current waterfront situation of two different areas: Mama Lishe and the area closest to the Kivukoni ferry terminal. Figure 166 and 168 are cross sections showing the future situation of the same areas according to the new design. These cross sections represent the areas where the sea wall has its minimum and maximum height.

Figure 165 shows the current waterfront situation where Mama Lishe is situated, several meters below Kivukoni Road. A retaining wall separates the Mama Lishe area from the road. Figure 167 presents the current waterfront situation closest to the Kivukoni ferry terminal, which is the steepest area along the waterfront. The section demonstrates how most parts of the waterfront are featured today, that is by slopes covered by vegetation.

Figure 166 displays the future situation of the Café Area where the sea wall is at its minimum height, creating a close contact to the ocean at the outdoor dining. The future situation of the Restaurant is presented in figure 168. This is where the sea wall reaches its maximum height. Steps facing the ocean provide opportunities for water contact. Creating different heights of the sea wall and beach promenade provide different experiences and views.

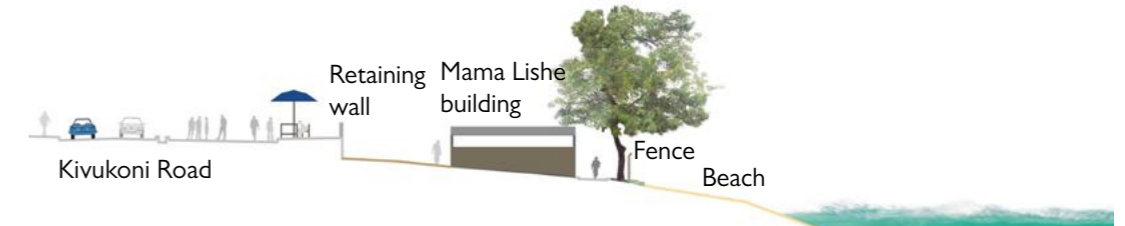


Figure 165. Section A1–A2. The section shows the current situation of the area where Mama Lishe is situated. Scale 1:500/A3.



Figure 166. Section A1–A2. The section shows the future situation of The Café Area, where the sea wall has its minimum height, creating a close contact to the ocean at the outdoor dining. Scale 1:500/A3.



Figure 167. Section B1–B2. The section presents the current waterfront situation of the area closest to the Kivukoni ferry terminal, which is the steepest area along the waterfront. Scale 1:500/A3.



Figure 168. Section B1–B2. The section presents the future situation of The Restaurant Area, where the sea wall reaches its maximum height. Scale 1:500/A3.

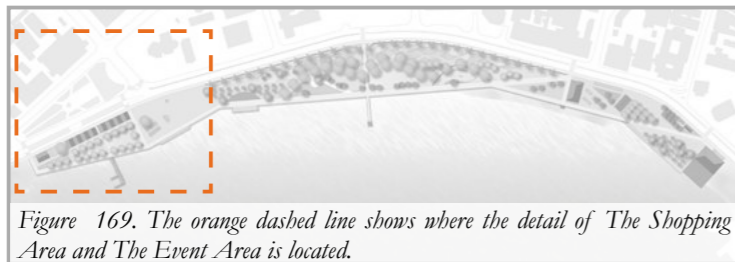


Figure 169. The orange dashed line shows where the detail of The Shopping Area and The Event Area is located.

The destinations and their parts

The following section contains a detailed description of the destinations and their parts along the waterfront. It outlines their design, what activities they host, and how the design keys have been applied.

THE SHOPPING AREA

The commercial businesses have been concentrated to The Shopping Area (figures 169, 170 and 171) since it has a strategic location; close to the new BRT bus stop, Bustani ya Posta, Lutheran Church and the commercial businesses in the CBD. Hence a large amount of people will be moving in this area. The businesses are vital in order to achieve improved connections with the other commercial activities in the CBD, and to attract more visitors to the waterfront in general. They will provide services for people arriving or departing with the BRT at the new bus stop, people visiting the Lutheran Church and Bustani ya Posta or just walking along Kivukoni Road. In addition, they will generate new job opportunities. The businesses include a tourist information, kiosks, book shops and souvenir shops. There are also public restrooms at the west end. Just south of the shops there is a green space of grass and plantings of groundcovers and solitaires. This green space is a flat plane, while the walkways are leaning three percent down to the sea wall. This creates an elongated sitting space towards the beach promenade. From the elongated bench it is possible to watch the ocean and harbor. Being located closest to Kivukoni Road, the shops will act as noise barriers which help reduce traffic disturbances from Kivukoni Road and create a relaxing environment at the green space. This destination also hosts boat tours which depart to smaller adjacent islands. This will give visitors a chance to experience the harbor and get in close contact with the ocean.

THE EVENT AREA

The Event is located right by the junction of Kivukoni Road and Maktaba Street and by the Lutheran Church (figures 169, 170 and 172). At this destination visitors will get the chance to experience the unique music, dance and food culture of DSM. This is a very strategic point, since it is connected to Maktaba Street and is close to Bustani ya Posta, the Lutheran Church, the new bus stop and to commercial businesses in the CBD. The open character of this destination increases physical connections to Kivukoni Road and Maktaba Street and creates clear visual connections to the ocean, harbor and Kigamboni. The design of the area has been inspired by the Lutheran Church, by placing benches in the same formation of the benches within the church. The bench formation is covered by a roof, which protects visitors from sun and rain. In front of the benches there is a permanent stage, which represents the altar of the church that can be used as a speakers corner. Artwork close to the walkway along Kivukoni Road creates an eye catcher for people arriving from Maktaba Street. Unprogrammed space situated east of the permanent stage generates flexibility and can be used for various events and to put up a larger temporary stage if necessary. The idea about creating an area for events at this location is to connect the activities in the church with the outdoor activities at the waterfront. This in addition with the bench formation will help highlight the church hence the cultural heritage of DSM. When the Event Area is not used for events, the benches with backrests provide comfortable seats. There are plenty of seats here since there will be a large number of people visiting this strategic point. Sitting steps towards the ocean allow visitors to come close to the water.

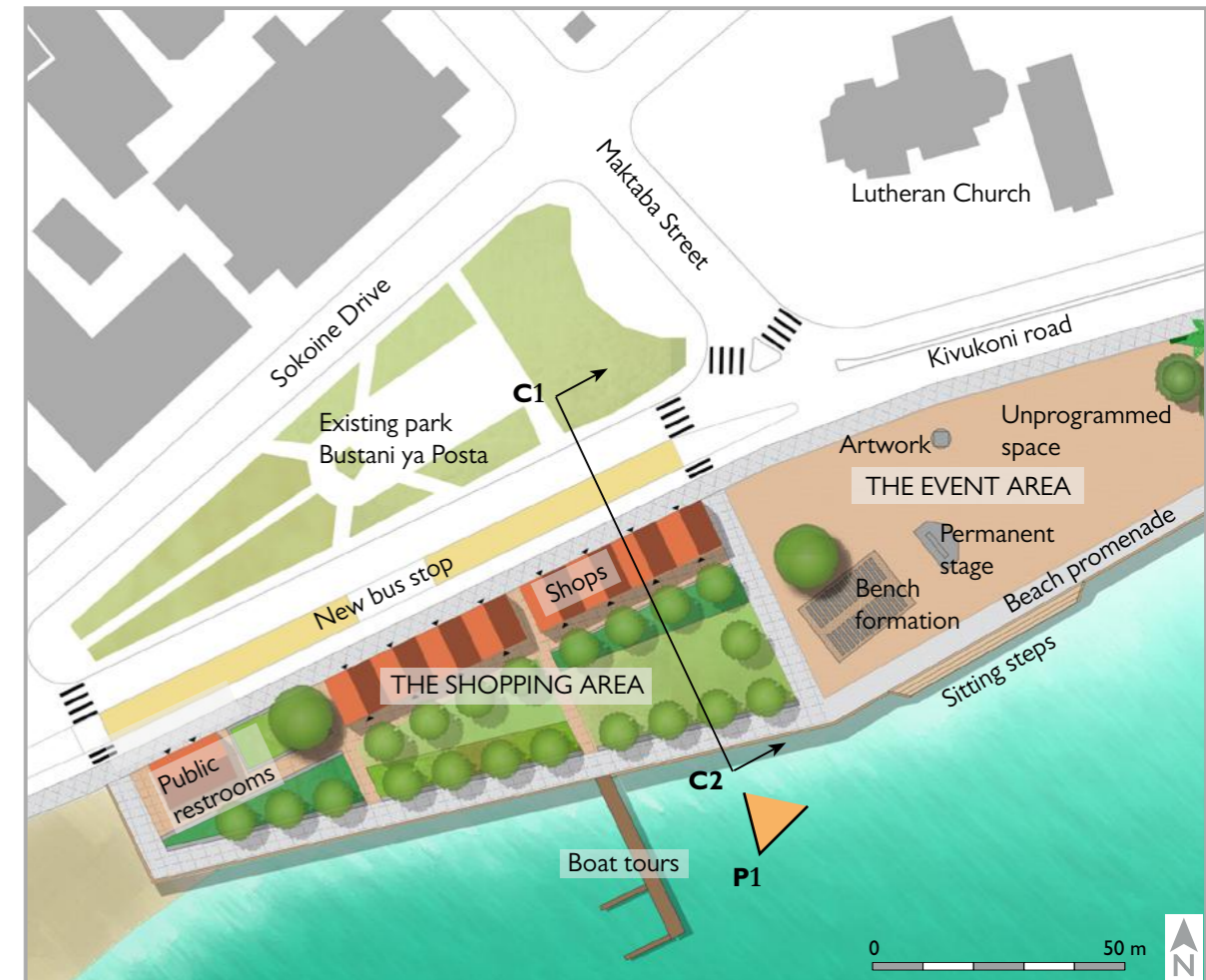


Figure 170. Detail of The Shopping Area and The Event Area. Scale 1:1500/A3.

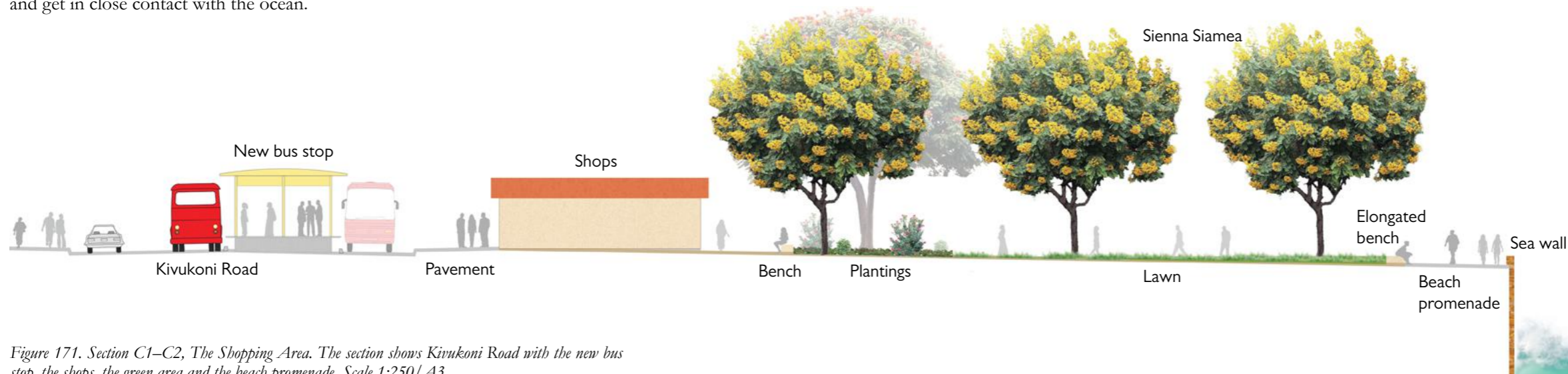


Figure 171. Section C1–C2, The Shopping Area. The section shows Kivukoni Road with the new bus stop, the shops, the green area and the beach promenade. Scale 1:250/A3.



Figure 172. Perspective 1 – Concert at The Event Area. The destination can be used for different types of events where visitors can experience the distinct music, dance and food culture of Tanzania. The foreground shows the beach promenade, the sitting steps towards the ocean, the bench formation, the altar, the art work, the elevated planting with an African tulip tree, and a temporary stage set up at the unprogrammed space. A roof makes it possible to sit at the benches during all weather conditions. The background shows Kivukoni Road and the BRT, the Lutheran Church and other buildings in CBD.

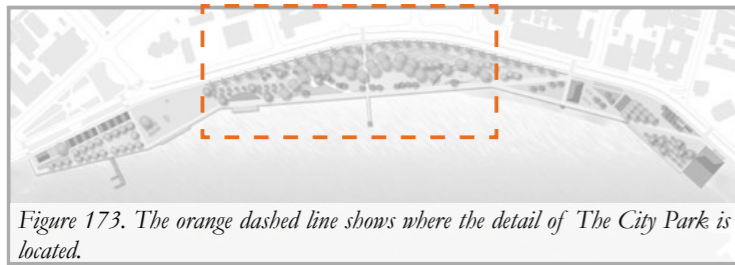


Figure 173. The orange dashed line shows where the detail of The City Park is located.

THE CITY PARK

The City Park is the largest destination and is an elongated green space featured by a classic park environment. Walkways, benches and the parts The Café Area, The Sea Play, The Game Area and The Skate Park are surrounded by lush plantings, flexible lawns and shading trees. The City Park destination (figures 173, 174, 175 and 176) is located in front of the hotel Hyatt Regency Dar es Salaam, The Kilimanjaro. The marine police was previously located in this area. To create a continuous public space we decided to relocate the marine police to the west end of the waterfront. Since the owner of the hotel wished to create a public garden in front of the hotel we have suggested this area to become the most green and lush one. The City Park has an organic design language and links together the more strict parts of the waterfront in the west and east.

In order to create dynamic plantings they consist of three different characters: shrubs, groundcovers and groundcovers and solitaires. There are also two lawns, which generate flexibility by providing visitors the chance to sit down as well as pursue ball games. In the middle of The City Park is a pavilion which provides shelter from sun and rain. A walkway with benches at strategic places in the shade of African Tulips runs through The City Park. By the crosswalk at Kivukoni Road there is a paved entrance area to the waterfront with some small plantings and benches. The straight walkway that runs from the hotel down to the ocean is extended into the ocean by an ocean pier leading to a view point. This is the perfect place where visitors can enjoy the sea breeze and attractive views.



Figure 174. Detail of The City Park. Scale 1:1250/A3.

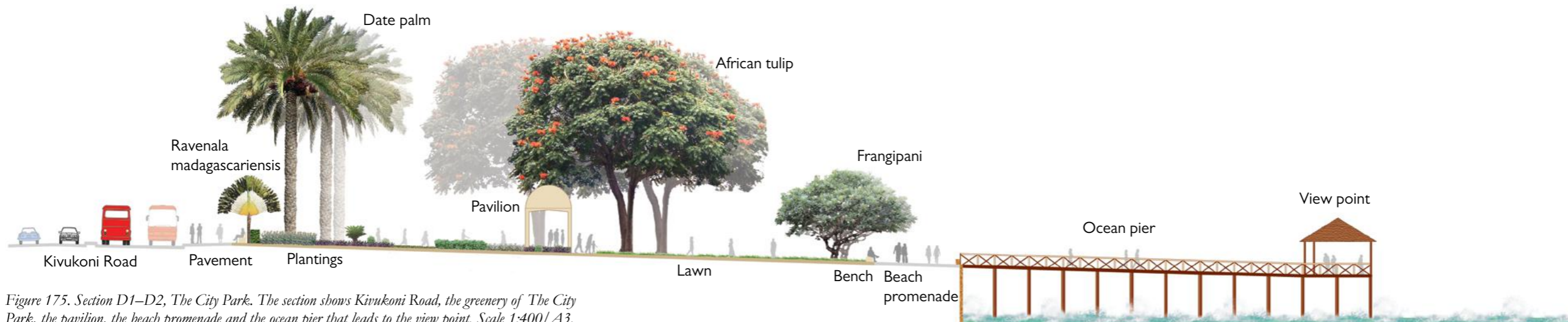
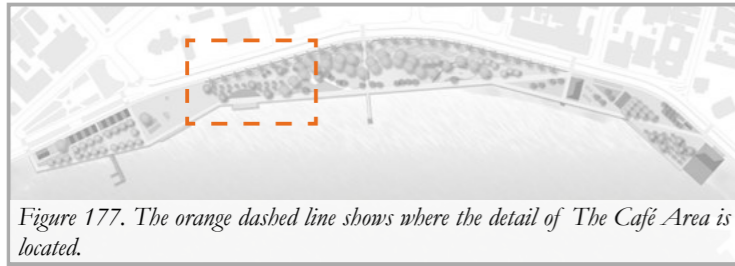


Figure 175. Section D1–D2, The City Park. The section shows Kivukoni Road, the greenery of The City Park, the pavilion, the beach promenade and the ocean pier that leads to the view point. Scale 1:400/A3.



Figure 176. Perspective 2 – The City Park. An elongated green space featured by a classic park environment of lush plantings, flexible lawns, winding walkways with benches placed in the shade of the African tulip trees. The foreground shows the crosswalk and entrance in front of Hyatt Regency Dar es Salaam, The Kilimanjaro, with benches and small plantings facing Kivukoni Road. The background shows the ocean pier that leads to the view point, the ocean, Kigamboni and the port of DSM.



THE CAFE AREA

– Part of destination The City Park

The Café Area (figures 177, 178, 179 and 180) is situated where the former restaurant facilities, Mama Lishe, were established. Since Mama Lishe was a very popular place for working people in the CBD to have cheap meals, we suggested an upgraded new version of this business at the same location. Mama Lishe Café is facing the ocean and has a bottom and a top floor where it is possible to have breakfast, lunch or dinner and enjoy the nice view of the harbor. The shape of the building has been inspired by waves and an organic design. There are two entrances at the north side of the building, and one entrance on the south side. Just south of the building there is an outdoor dining protruding into the ocean to create a close contact with the water. This is also the point along the waterfront where the sea wall has its minimum height, 3 meters above sea level, which means that this is where visitors will be closest to the water. During evening time the café turns into a pub. The café building is enclosed by a tree plaza which consists of Indian Almond trees and a few Royal Palms. Each tree is enclosed by plants. The Indian Almond trees are also enclosed by concrete benches around the plants, creating nice cool seats in the shade of the trees. The tree plaza is creating a smooth transition from the hard surfaces of the open Event Area and the lush greenery within The City Park.

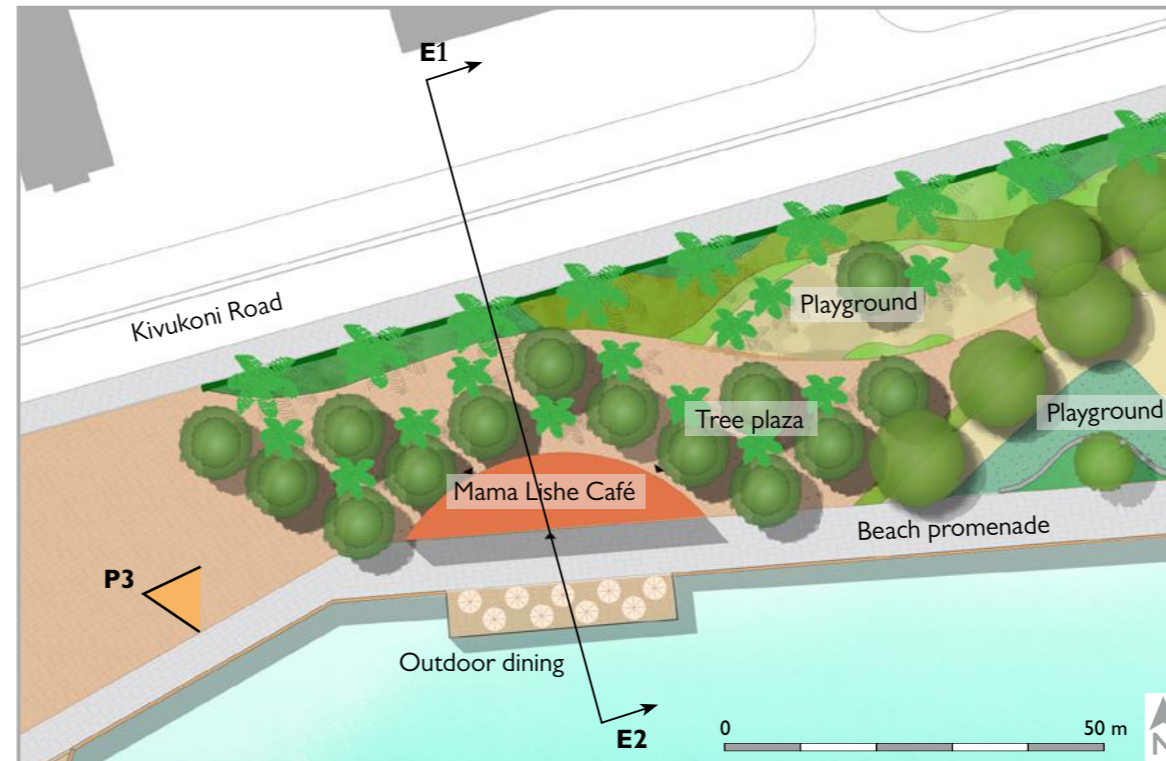


Figure 178. Detail of The Café Area – part of destination The City Park. Scale 1:1000/A3.

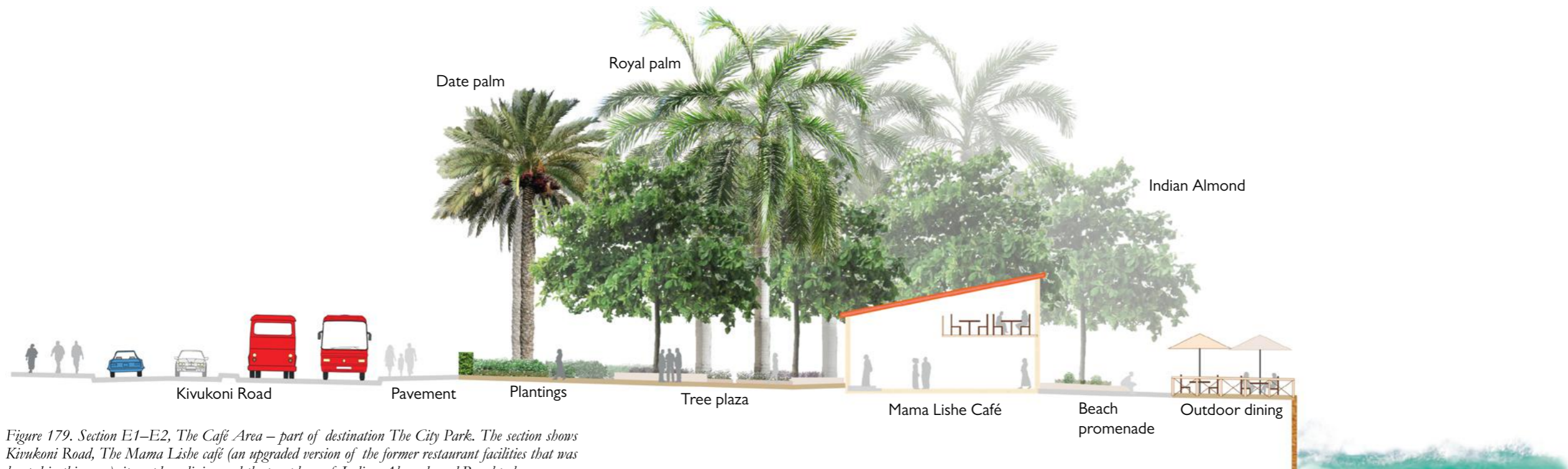


Figure 179. Section E1–E2, The Café Area – part of destination The City Park. The section shows Kivukoni Road, The Mama Lishe café (an upgraded version of the former restaurant facilities that was located in this area), its outdoor dining and the tree plaza of Indian Almonds and Royal palms. Scale 1:250/A3.



Figure 180. Perspective 3 – The Mama Lishe Café and the beach promenade. At the outdoor dining the visitors can come in close contact to the ocean, since this is where the sea wall has its minimum height. The straight beach promenade creates a clear view towards the other parts of the waterfront. From this point there is also a clear view towards the Kivukoni ferry terminal.

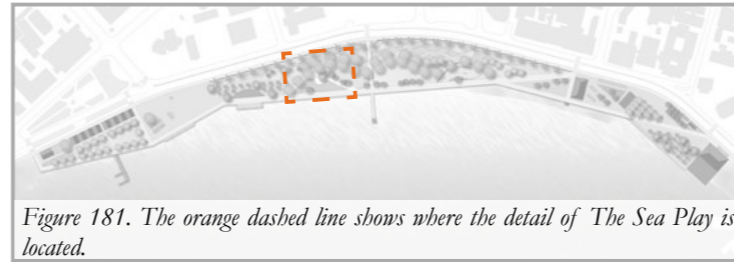


Figure 181. The orange dashed line shows where the detail of The Sea Play is located.

THE SEA PLAY
– Part of destination The City Park

The Sea Play (figures 181, 182 and 183) was inspired by a waterfront landscape: small green islands in the ocean, the ocean itself, the beaches and the greenery of the landscape. In this case, the small islands represent the elevated planting with groundcover and Senna siamea. Just north of this planting, there is an area of blue rubber asphalt, which represents the ocean. One area of the rubber asphalt has been shaped as small waves, where the children can run in between and jump on. The rubber asphalt meets an area of sand, which represents the beach. In the outskirts of the sand area there are groups of Sago palms, an Indian almond, Frangipani trees and Senna siamea, which represent the greenery of the landscape. The playground was inspired by both the shape and elements of the waterfront landscape, but also to some extent different animals living in the ocean.

The playground offers standard play units in a marine theme such as a climbing net, swings, a trampoline, a slide and swing animals. There is also some balance logs, on which the children can jump and practice their balance and motor skills. Some of the play units are covered by a roof which provides protection against sun and rain. We strived to create a playground with plenty of space, to avoid the issue of overcrowding and to have space for the children to run around. The playground also offers space for the parents with plenty of seats in the outskirts of the playground in order to get an overview of the children playing. There are also umbrellas for protection against sun and rain. In addition, we wanted to achieve a playground with a natural design hence to create a lush and green environment.

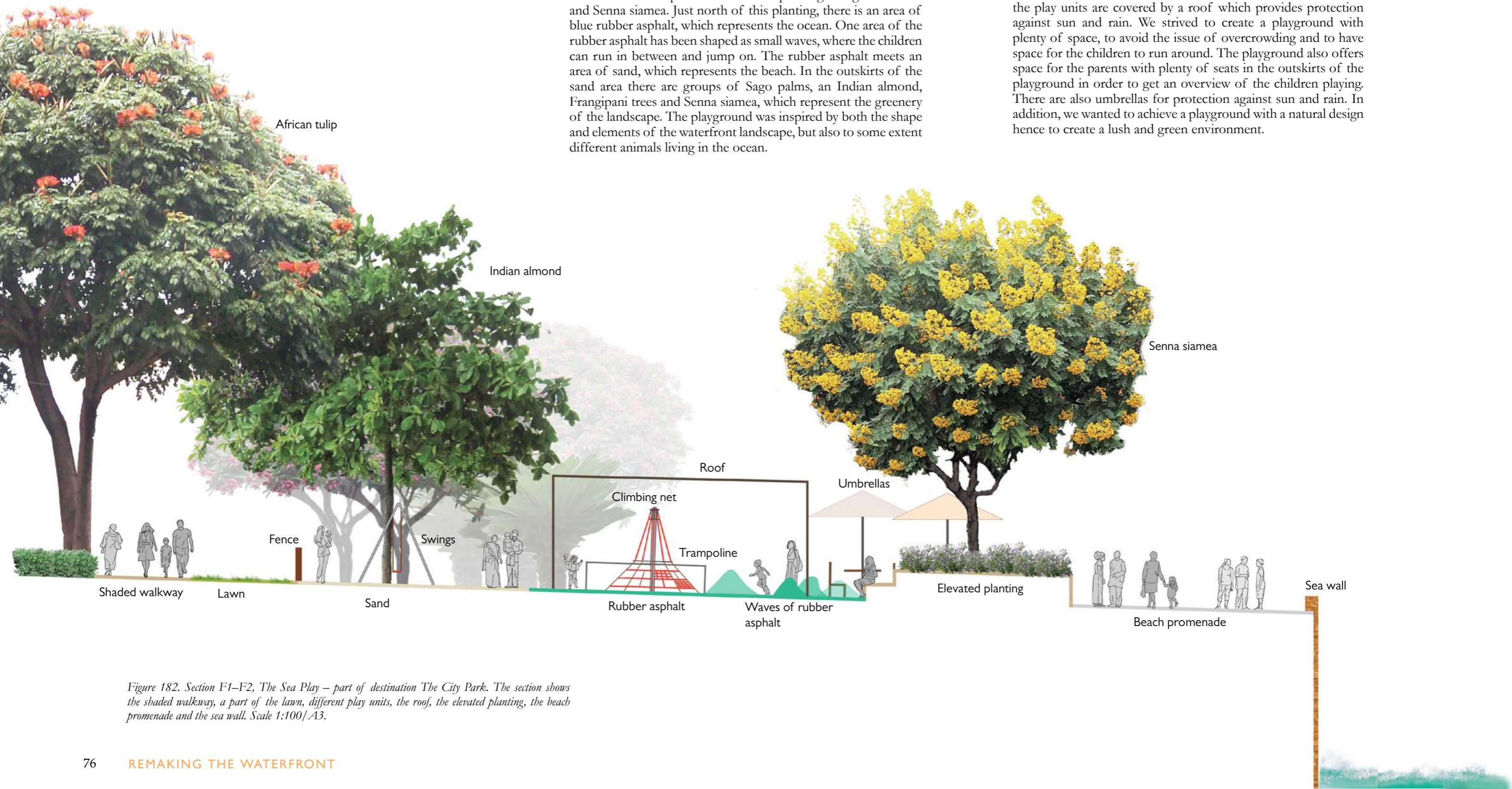


Figure 182. Section F1–F2, The Sea Play – part of destination The City Park. The section shows the shaded walkway, a part of the lawn, different play units, the roof, the elevated planting, the beach promenade and the sea wall. Scale 1:100/A3.

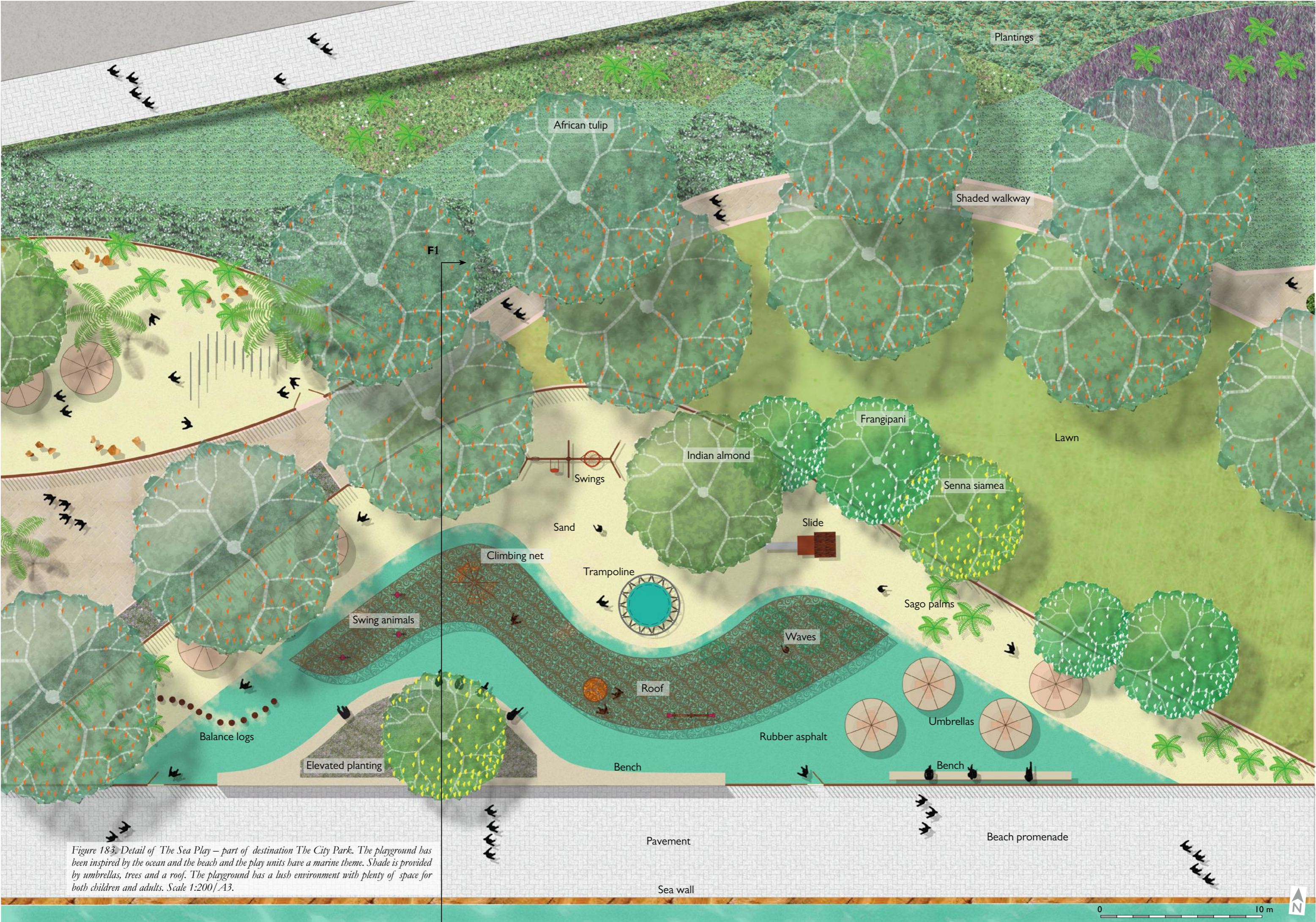


Figure 183. Detail of *The Sea Play* – part of destination *The City Park*. The playground has been inspired by the ocean and the beach and the play units have a marine theme. Shade is provided by umbrellas, trees and a roof. The playground has a lush environment with plenty of space for both children and adults. Scale 1:200/A3.

F2

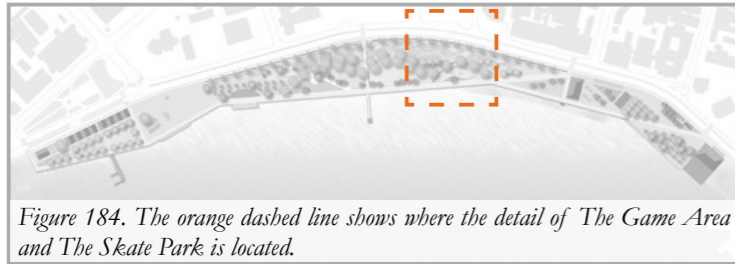


Figure 184. The orange dashed line shows where the detail of The Game Area and The Skate Park is located.

THE GAME AREA

– Part of destination The City Park

When observing the CBD and Kivukoni, we noticed that playing board games was a popular activity, both during day and evenings. Therefore, we suggested a special place designed for this purpose called The Game Area (figures 184, 185 and 187). The Game Area is an elevated planting with groundcover and Flamboyant trees. The Flamboyant trees have a wide crown which is optimal for providing shade. A bench is enclosing the elevated planting, and there are some standalone benches 1.3 meters from this bench, and there are some standalone benches have small tables where the game participants can place their game board. The game area is a place where people interested in games can meet, play, socialize and observe.

THE SKATE PARK

– Part of destination The City Park

The Skate Park (figures 184, 185 and 186) is an area designed specifically for youths. We were inspired by a visit to Slipway, where we discovered that some youths were skating. We strived to create a multifunctional area and skating ramp that can be used for skating, but also for people who just want to sit down and relax and watch the skaters. In the middle of the area there is a pipe that the skaters can slide on. There is also an elevated planting of groundcovers and Frangipani trees and a bench facing the skate area in adherence to the planting.

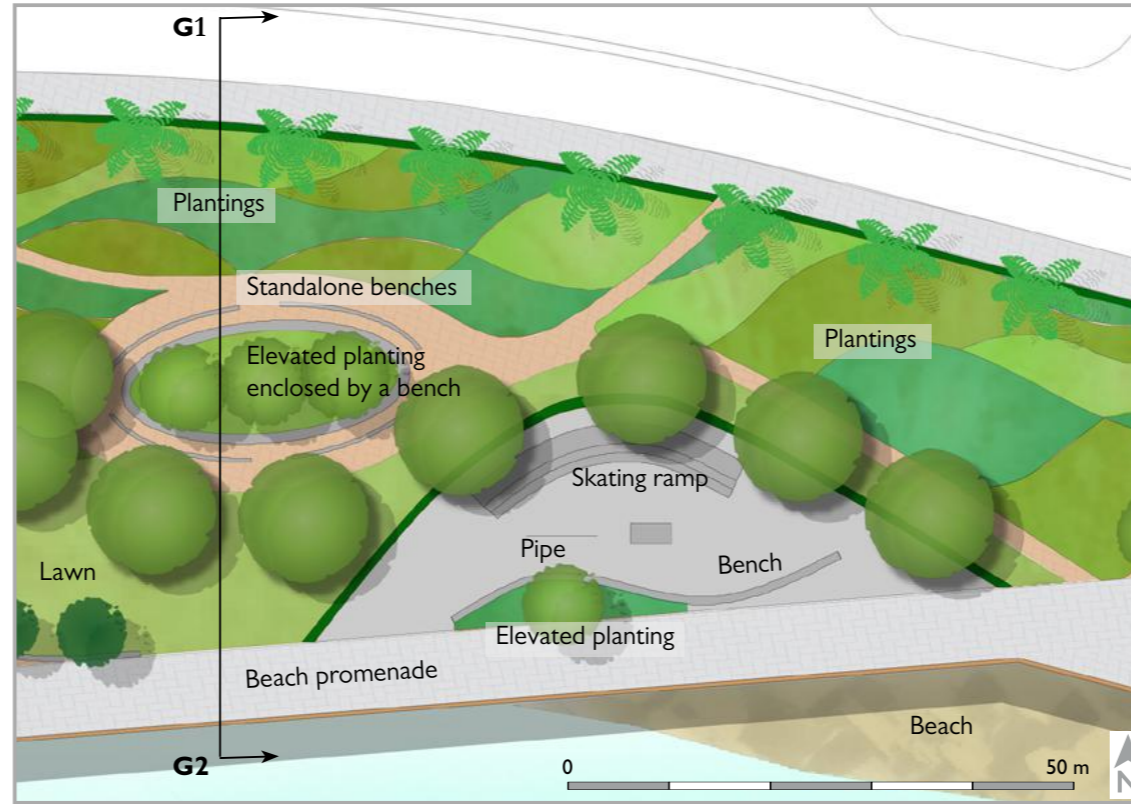


Figure 185. Detail of The Game Area and The Skate Park. Scale 1:750/A3.



Figure 186. The skating ramp in The Skate Park is multifunctional and can be used for both skating and as seats.

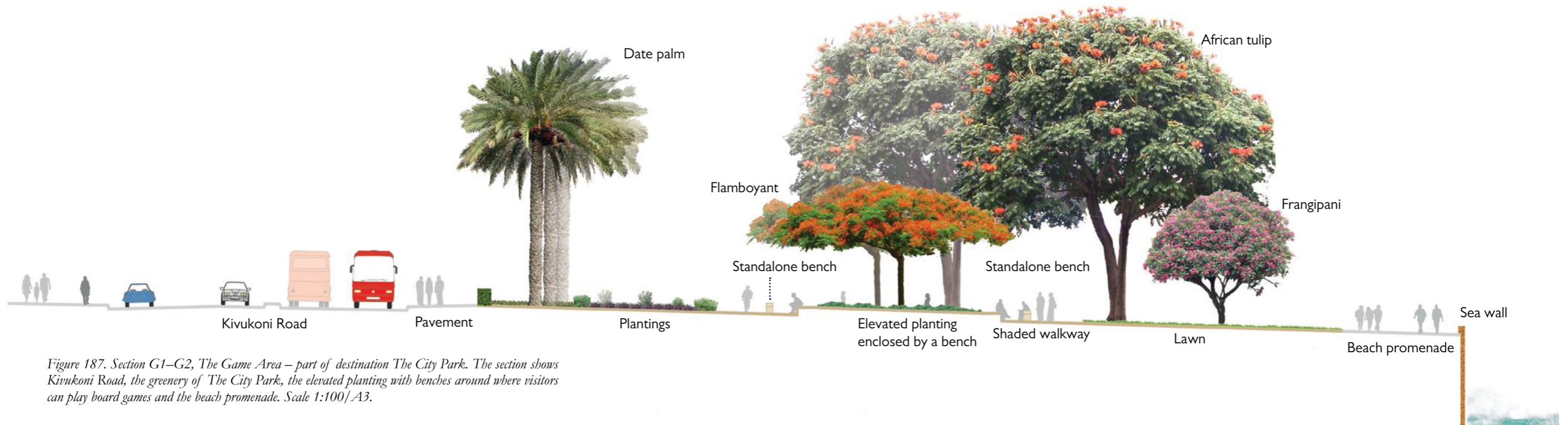
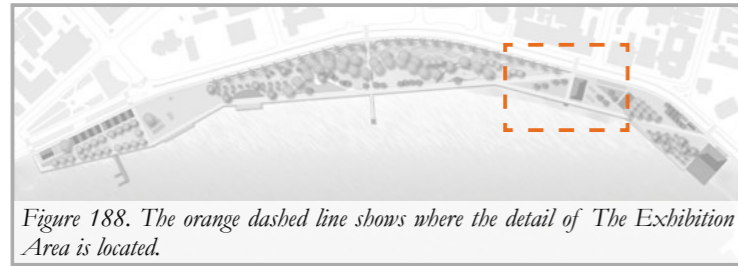


Figure 187. Section G1–G2, The Game Area – part of destination The City Park. The section shows Kivukoni Road, the greenery of The City Park, the elevated planting with benches around where visitors can play board games and the beach promenade. Scale 1:100/A3.



THE EXHIBITION AREA

The Exhibition Area (figures 188, 189 and 190) is a destination which mainly turns to tourists, to learn about the history of the harbor, Kivukoni and the CBD and the culture of DSM. This building will host arts and crafts exhibitions and history exhibitions. The south façade offers spectacular views towards the ocean, harbor and Kigamboni, mainland at the other side of the bay. At the west side of the building there are elevated plantings enclosed by benches and an area of low fountains, which creates an attractive entrance to the exhibition building. The fountains also provide actual water contact where children can play. At the east side of the building there is an elongated pergola with climbing plants and seats towards Kivukoni Road. Just south of the pergola there is an elevated planting in the shape of a triangle enclosed by a bench. Close to this planting there are three elevated plantings in the shape of a rectangle which are also enclosed by benches. The view point which protrudes from the beach promenade provides a spot where people can watch attractive views and survey the waterfront.

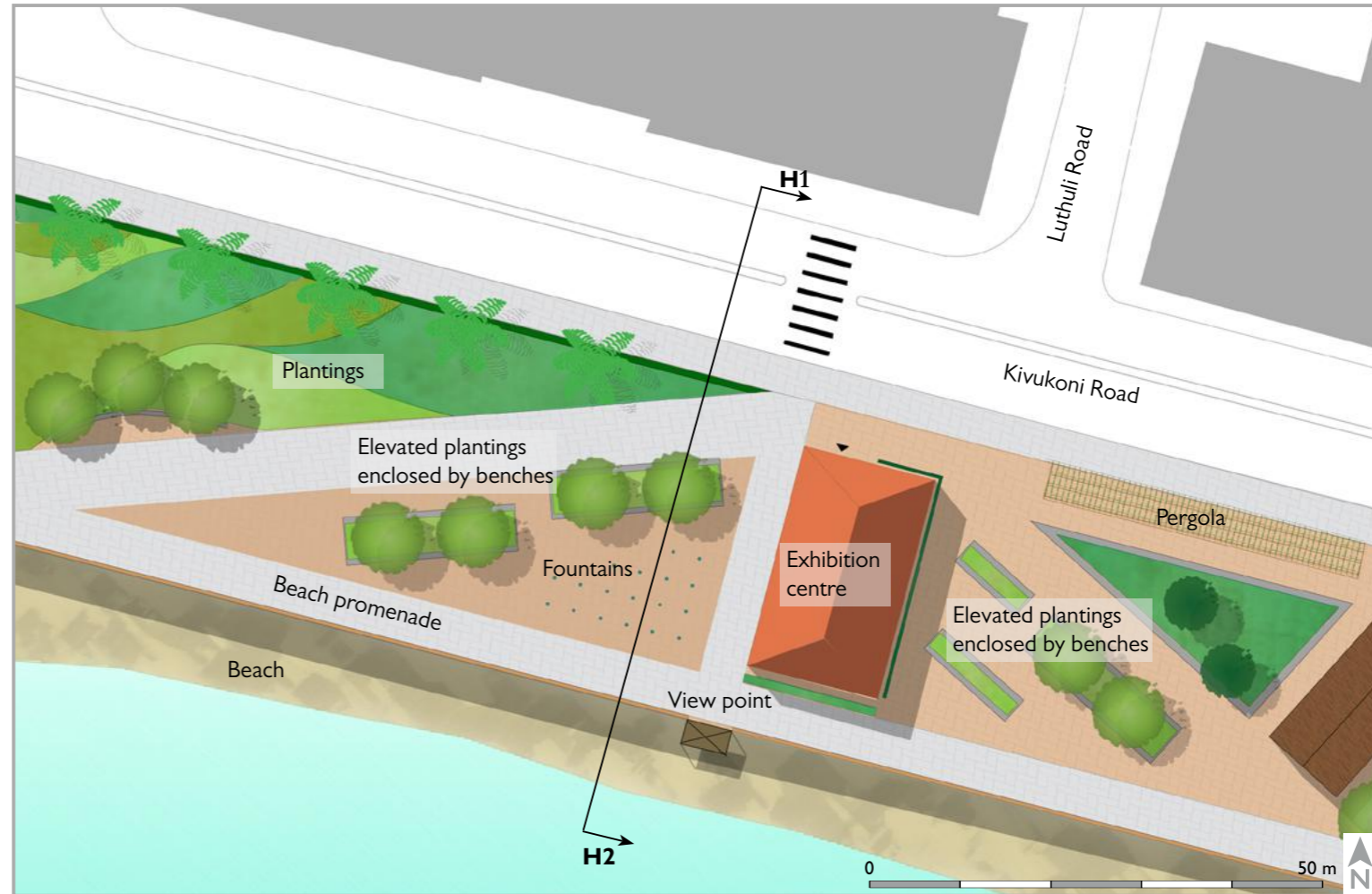


Figure 189. Detail of The Exhibition Area. Scale 1:750/A3.

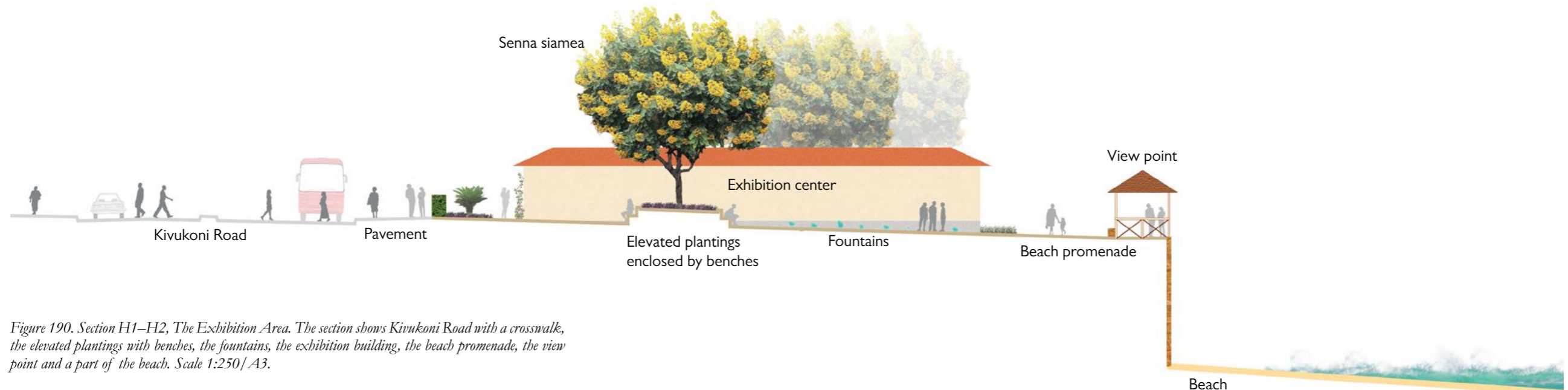
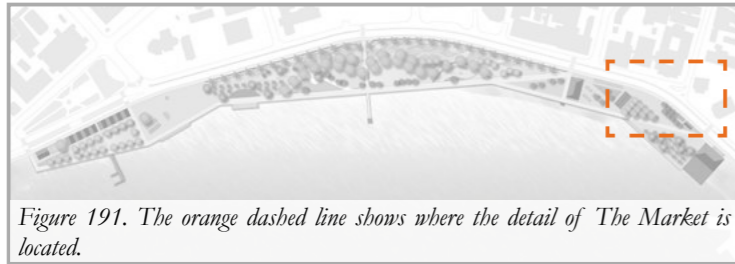


Figure 190. Section H1–H2, The Exhibition Area. The section shows Kivukoni Road with a crosswalk, the elevated plantings with benches, the fountains, the exhibition building, the beach promenade, the view point and a part of the beach. Scale 1:250/A3.



THE MARKET

– Part of destination The Food Plaza

The Market (figures 191, 192 and 193) consists of an open unprogrammed space towards Kivukoni Road and an area of elevated plantings of groundcovers and Flamboyant trees enclosed by benches. The purpose of this area is to serve as a food market during the day and hosting food markets in the evening similar to the ones at Forodhani Park in Zanzibar. The unprogrammed space can be used by vendors for placing tables and pushcarts to sell their edibles and prepare the food markets. Rent is collected from the vendors, which will be used for maintenance costs of the waterfront. The elevated plantings enclosed by benches in the shade of the Flamboyant trees will provide nice and cool seats for customers and visitors. Towards Kivukoni Road at the east part of the area there are public restrooms and a recycling station.

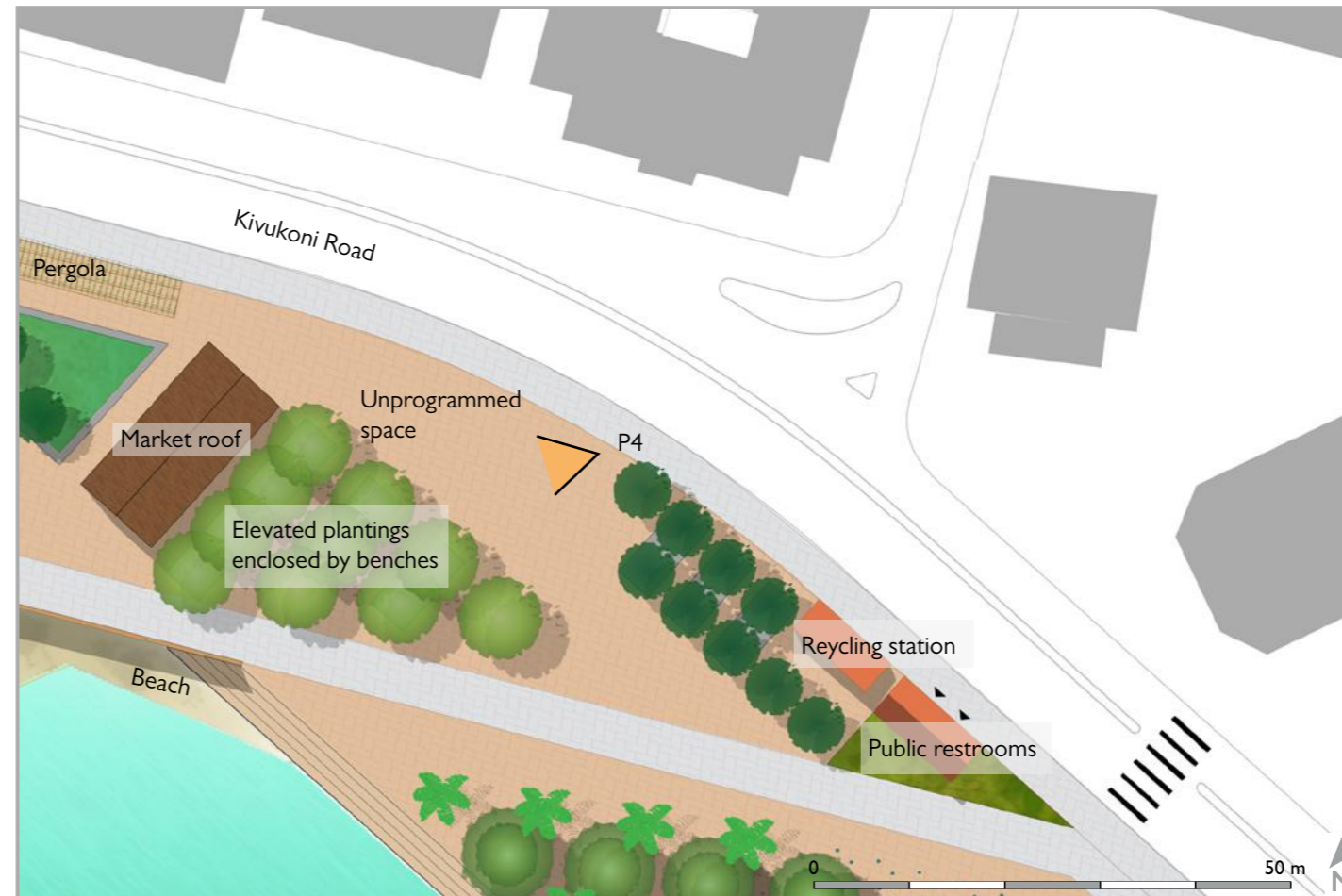




Figure 193. Perspective 4 – The Market. The unprogrammed space will serve as a food market during the day where vendors can rent a space for their tables from where they can sell local fruit and other edibles. During the evening this space will host food market, similar to the ones at Forodhani Park, Zanzibar. The visitors can sit down and relax in the shade of the Flamboyant trees.

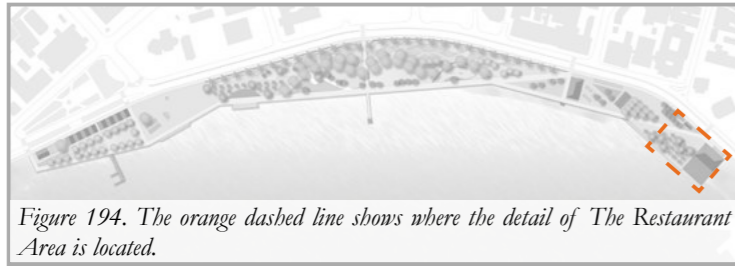


Figure 194. The orange dashed line shows where the detail of The Restaurant Area is located.

THE RESTAURANT AREA

– Part of destination The Food Plaza

The Restaurant Area (figures 194, 195 and 196) is located in the east part of the waterfront, next to the Kivukoni ferry terminal. The idea of the restaurant is to provide services for people arriving or departing with the Kivukoni ferry. The restaurant will serve different food traditions and provide entertainment such as live bands and pool tables. The outdoor dining with thatched roof is situated right by the ocean. Just west of the restaurant there is a tree plaza of Indian almonds and a few Royal palms enclosed by plantings. There are also benches around the Indian almond trees. Just north of the tree plaza there is an area of low fountains. The Restaurant Area is the point where the sea wall has its maximum height, which is 6.6 meters above sea level. This creates a clear view towards the Lutheran Church, the St Joseph Cathedral and the port of DSM. Sitting steps towards the ocean help to connect the waterfront with the Indian Ocean.

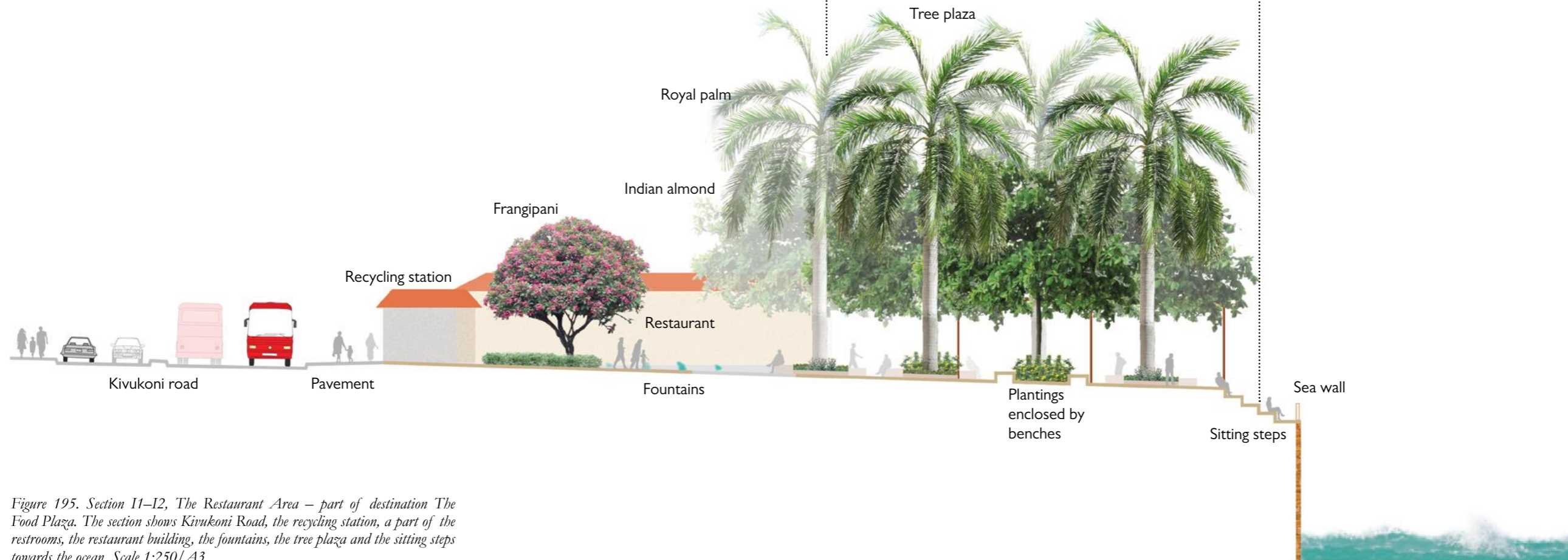


Figure 195. Section I1–I2, The Restaurant Area – part of destination The Food Plaza. The section shows Kivukoni Road, the recycling station, a part of the restrooms, the restaurant building, the fountains, the tree plaza and the sitting steps towards the ocean. Scale 1:250/A3.



Figure 196. Detail of The Restaurant Area – part of destination The Food Plaza. The restaurant is located close to Kivukoni ferry terminal, to provide services for people arriving or departing with the ferry. Scale 1:200/A3.



Plant selection

The plant selection was based on three requirements. Firstly, the plants have to cope with the prerequisites of the area that is a coastal environment. This means the plants have to stand salt winds. Secondly, the plants should be native. Some exotic plants can be suggested as well, as long as they are non invasive. Finally, the plants have to be quite low maintenance, since the resources are limited in DSM. The plant selection was based on a combination of vegetation that needs to be maintained regularly, but also vegetation that requires very little or no maintenance at all.

TREES

The trees provide different functions and values depending on their location. Most of the trees provide shade for places where people can sit. We suggested some trees for their aesthetic values like decorative flowering of varying colors, a special character of the leaves or a particular crown shape. Figure 197 displays the location of each tree species along the waterfront.

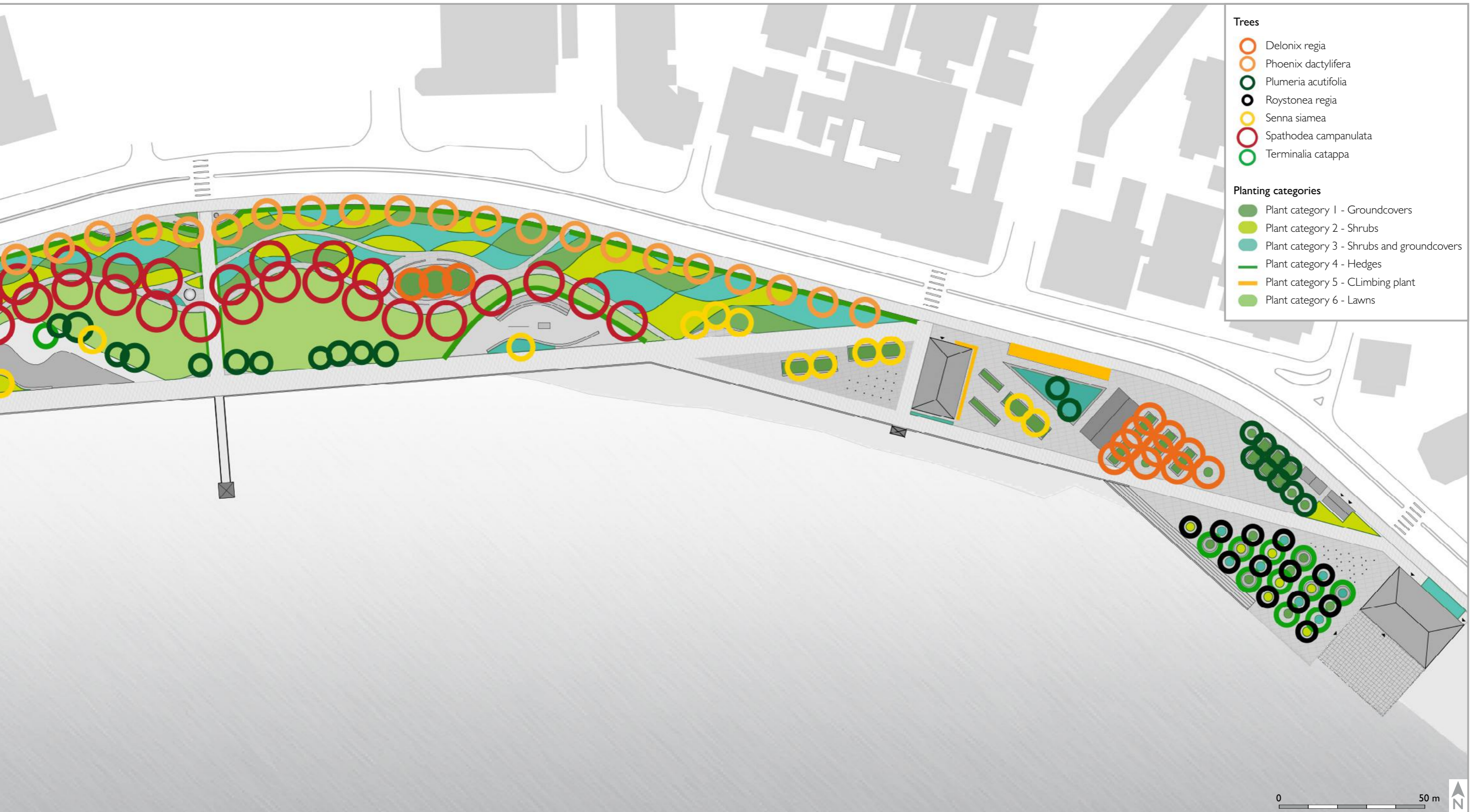
Flamboyant has decorative orange flowers and a wide canopy that provides shade and was therefore planted at The Market Area and in The Game Area. Two rows of African tulip, a large tree good for shading larger areas, was planted along the slithering walkway in The City Park. Frangipani is a smaller tree with decorative flowers that has a nice fragrant. We used Frangipani as a solitary close to benches, for instance along the beach promenade in The City Park. Senna siamea is characterized for its large yellow flowers and provides shade to seats in The Shopping Area, The Sea Play and The Exhibition Area as well as along the beach promenade in The City Park. Indian almond and Royal palm were suggested at the tree plazas at The Café Area and at The Restaurant Area. Indian almond was planted at the benches because of its shading crown, while the Royal palm provides ornamental and decorative values to the tree plazas. Date palm was used for its ornamental and historic value since it came to DSM with the Arabs; hence a row was planted along the sidewalk along Kivukoni Road. Figure 203 presents detailed information of the primary function and character of each tree species.

PLANT CATEGORIES

We selected plants of different characters and growth habits in order to achieve dynamic greenery along the waterfront. Figure 197 displays the location of each plant category along the waterfront. In order to suggest a more conceptual design of the plant material, we divided the plants into six categories, referred to as plant categories.



Figure 197. The illustration plan displays the plant selection of the design proposal, by showing the tree species and the plant categories. Scale 1:250/A3.



The six plant categories are the following:

PLANT CATEGORY 1 – GROUNDCOVERS

The Groundcovers are characterized by their low height and by their ability to spread horizontally. They are low maintenance, since they rarely have to be cut or even cut at all, and for keeping weed away by covering the ground. Some species create dense carpets while others grow sparser, and some groundcovers can act as climbing plants as well. We used groundcovers at areas that have to be easy to overview, as well as in elevated plantings (figure 198).



Figure 198. Plant category 1 – Groundcovers. The illustration shows the groundcover *Wedelia trilobata* which has been planted in the elevated planting in The Game Area. Groundcovers are characterized by their low height and being low maintenance by covering areas hence keeping weed away.

PLANT CATEGORY 2 – SHRUBS

The Shrubs are characterized by their medium to high height, which provide volume hence creating spatiality. Some shrubs can be used as solitaires for aesthetic values like decorative flowers, special character of the leaves or a particular shape. We used shrubs mainly in the plantings of The City Park, creating a lush and dynamic impression (figure 199).

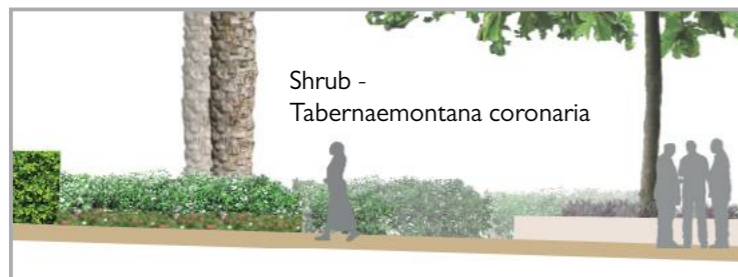


Figure 199. Plant category 2 – Shrubs. The illustration shows the shrub *Tabernaemontana coronaria*, which has white decorative flowers and shiny leaves, at The Café Area in The City Park. The shrubs are characterized by their medium to high height, which provide volume hence creating spatiality. Some shrubs can also be used as solitaires for their decorative flowers or leaves.

PLANT CATEGORY 3 – GROUNDCOVERS AND SOLITARIES

The Groundcovers and solitaires consist of groundcovers which will create dense carpets that will act as a base for the planting, and solitaires that will add volume and aesthetic values. We used this plant category at areas where we wanted to keep the vegetation low, but still have some plants that provide volume and specific aesthetic values (figure 200).

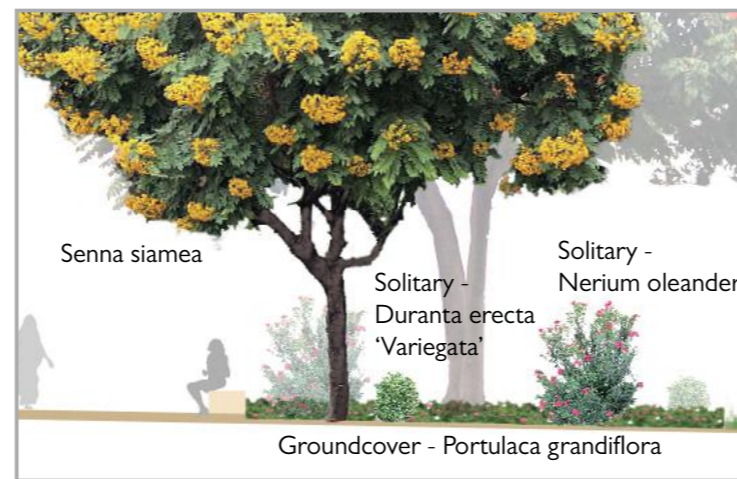


Figure 200. Plant category 3 – Groundcovers and solitaires. This plant category has been used at areas where we wanted to keep the vegetation low, but still have a few plants that add volume to the planting and provide specific values such as a unique growth habit, beautiful flowers or a certain color.

PLANT CATEGORY 4 – HEDGES

The Hedges are characterized by their upright growth habit and are useful as spatial dividers. They have varying width and height, depending on the species and how they are cut. We used hedges to enclose certain areas and as spatial dividers. For instance, a hedge of *Murraya paniculata* was planted along Kivukoni Road which separates the waterfront from the road in order to create a clear border that will increase safety for pedestrians along the waterfront (figure 201).

PLANT CATEGORY 5 – CLIMBING PLANT

The Climbing plants are characterized for their climbing abilities and are used to create green walls and roofs. Climbing plants are often used as solitaires close to entrances or seats. We used *Bougainvillea* next to the entrance at the exhibition buildings, and at the pergola located next to Kivukoni Road (figure 200).



Figure 201. Plant category 4 – Hedges and Plant Category 5 – Climbing plants. The picture shows the hedge along Kivukoni Road and the climbing plant *Bougainvillea* at the Exhibition center. Hedges are characterized by their upright growth habit and are useful as spatial dividers. Climbing plants are characterized for their climbing abilities and are often used to create greenery at walls or pergolas.

PLANT CATEGORY 6 – LAWNS

Lawns are flexible areas that can be used for a wide range of activities, such as sitting, having picnic, sunbathing, pursuing different types of sports and games. However, lawns are high maintenance since they have to be cut at least once a week, and should therefore be used to a limited extent. We used lawns as a complement to the large plantings, to have some flexible areas along the waterfront (figure 202).

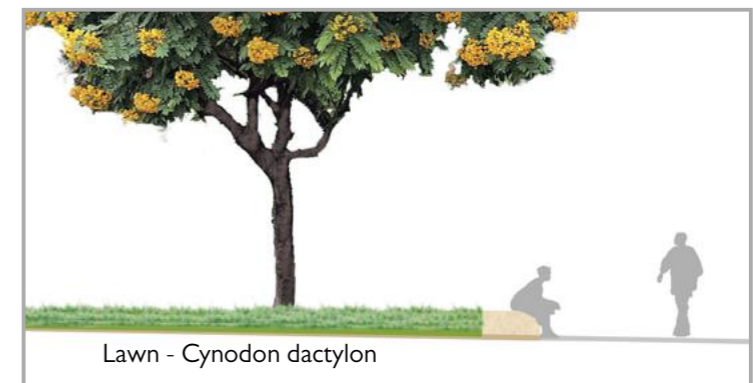


Figure 202. Plant category 6 – Lawn. Lawns are flexible since they can be used for a wide range of activities, such as sitting, having picnic, sunbathing and pursuing different types of sports and games. However, they should be used sparsely since they are high maintenance.

PLANTS AND TREES INCLUDED IN THE DESIGN PROPOSAL

The following list outlines which plants we included in the plant categories. The list outlines the key characteristic of each plant as well as which plant category it belongs to. The information of this list is based on observations as well as interviews with Anitha Urasa and Maria Ignatieva. We have verified the information through supporting literature.

Latin name - Common name	Primary function	Character
Trees		
<i>Delonix regia</i> - Royal poinciana, Flamboyant	Decoration. Shade.	Wide crown with light bright green leaves with a feathery appearance. Large, vivid red-orange flowers that blooms in December.
<i>Phoenix dactylifera</i> - Date palm	Ornamental. Culture bearer.	Came to DSM with the arabs, a reminder of the history. Broad grey trunk, large green palm leaves. Dates.
<i>Plumeria acutifoila</i> - Frangipani	Decoration. Shade.	Spreading shrub or small tree with a broad crown. Large leathery leaves. Sculpted white flowers with a yellow center.
<i>Plumeria rubra</i> - Red frangipani	Decoration. Shade.	Same as above, but with sculpted pink to red flowers with a yellow center.
<i>Roystonea regia</i> - Royal palm	Ornamental.	Large and symmetrical palm. Characteristic for the sculpted, smooth and grey-white trunk.
<i>Senna siamea</i> - Cassod Tree	Decoration. Shade.	Medium-size evergreen tree with high crown. Yellow flowers and green pinnate leaves.
<i>Spathodea campanulata</i> - African tulip, Nandi flame	Decoration. Shade	Fastgrowing, ornamental tree. Crinkled red orange flowers with yellow frilly edges. The buds look like tulips. Green pinnate leaves.
<i>Terminalia catappa</i> - Indian almond	Shade.	Upright, symmetrical crown, horizontal branches. Older trees, more flattened crown results in a spreading, vase shape. Large, glossy dark green, leathery leaves. Corky, light fruit.
Latin name - Common name	Plant category	Character
Plants		
<i>Allamanda cathartica</i>	Nr 2 Shrub.	Shrub with leathery green leaves and funnel shaped, yellow flowers.
<i>Allamanda violacea</i>	Nr 5 Climbing plant.	Funnel shaped, purple flowers and evergreen leaves.
<i>Barleria cristata</i>	Nr 2 Shrub.	Dark to pale green leaves. Funnel-shaped flowers in violet, pink or white.
<i>Bismarkia nobilis</i> - Bismarck palm	Nr 3 Solitary.	Palm with characteristic bluegrey, big leaves.
<i>Bougainvillea glabra</i> - Paperflower	Nr 5 Climbing plant.	Evergreen and climbing shrub. Fragrant flowers in different colors, for example pink, purple and white.
<i>Clerodendrum</i> (different species) - Bleeding heart-vine	Nr 2 Shrub. Nr 3 Solitary.	Sprawling shrub, with a vine-like character. Large leaves, flowers in pink or red and white.
<i>Codiaeum variegatum</i>	Nr 3 Solitary.	Evergreen alternate leaves that varies in both shape and colors, for example red, yellow and green.
<i>Crinum asiaticum</i> - Spider lily	Nr 2 Shrub. Nr 3 Solitary.	Dark green straplike leaves. Large, white flowers that are arranged in clusters.
<i>Cycas revoluta</i> - Sago palm	Nr 3 Solitary.	Symmetrical plant with shiny dark-green palmleaves places on a thick trunk.
<i>Cynodon dactylon</i> - Dog's tooth grass	Nr 6 Lawns.	Perennial grass that is fast-growing and forms a dense mat.
<i>Duranta erecta</i> 'Variegata'	Nr 3 Solitary.	Green leaves with cream white margins around.
<i>Hamelia patens</i> - Firebush	Nr 2 Shrub. Nr 3 Solitary.	Evergreen shrub with bright red-orange tubular flowers, even the flower stems are red.
<i>Hibiscus</i>	Nr 3 Solitary.	Large, dark green, shiny toothed leaves. Glorious, huge, flared and bell shaped flowers that occur in many colors.
<i>Ipomoea tricolor</i> - Morning glory	Nr 5 Climbing plant. Nr 1, Nr 3 Groundcover.	Large bright green leaves. Flowers are shaped like trumpets that comes in a color range from light blue to dark purple.
<i>Ixora coccinea</i>	Nr 2 Shrub. Nr 3 Solitary.	Dense, evergreen shrub with a rounded form. Glossy, leathery leaves. Small flowers organized in rounded clusters in different colors, such as red, orange, pink, white and yellow.
<i>Lantana camara</i> 'Variegata'	Nr 4 Hedge.	Deep green leaves with cream yellow margins around.
<i>Murraya paniculata</i> - Orange jasmine	Nr 4 Hedge.	Shiny, dark green leaves. Dense shrub that can be used as a hedge.
<i>Nerium oleander</i>	Nr 2 Shrub. Nr 3 Solitary.	Fast growing evergreen shrub with lance shaped leaves. Flowers in red, pink and white.
<i>Portulaca grandiflora</i> - Moss rose	Nr 1, Nr 3 Groundcover.	Semisucculent stems and leaves. Roselike small flowers in that comes in different bright colors, like rose pink, red, white and orange.
<i>Ravenala madagascariensis</i> - The traveler's palm	Nr 3 Solitary.	Long leaf stems with deep green leaves that extends out like a giant hand fan from the trunk.
<i>Ruellia brittoniana</i>	Nr 2 Shrub.	Evergreen shrub with lance-shaped dark green leaves. Trumpet shaped vibrant blue flowers.
<i>Sansevieria trifasciata</i>	Nr 1 Groundcover.	Higher groundcover with white and green upgrowing leaves. Low maintenance.
<i>Syngonium</i> - Arrow head plant	Nr 5 Climbing plant. Nr 1 Groundcover.	Oval or triangular leaves with heart or arrow-shaped bases. Green and cream white leaves.
<i>Tabernaemontana coronaria</i> - Pinnwheel jasmine	Nr 2 Shrub.	Small bushy evergreen shrub with small white starformed flowers.
<i>Tradescantia spathacea</i> - Boat lily	Nr 1 Groundcover.	Swordshaped dark green leaves that are violet underneath.
<i>Wedelia trilobata</i>	Nr 1, Nr 3 Groundcover.	Deeply lobed leaves and yellow-orange flowers.

Figure 203. List of plants and trees used in the design. The list outlines the key characteristics of each tree and plant. It also displays which plant category each plant belongs to.



Figure 204. *Tradescantia spathacea* – Boat lily. This groundcover has thick sword-shaped leaves bound together tightly on short stems. Photo: © “IMG_1525_ Oyster Plant” by Heiko S (CC BY)



Figure 205. *Nerium Oleander* – commonly known as Oleander. Can be used as a shrub and a solitary. It has a decorative pink flowering which makes a nice contrast to the blue colored leaves.



Figure 206. *Tabernaemontana coronaria* – Crape jasmine. This shrub has decorative white flowers and shiny dark green leaves.



Figure 207. *Murraya paniculata* – Orange jasmine. This plant has been used as a hedge along Kivukoni Road because it is dense and has a lush bright green color.



Figure 208. *Bougainvillea glabra* – Paper flower. Bougainvilleas are popular ornamental plants which have decorative flowers. It has been used at the pergola in The Exhibition Area and on the wall at the exhibition building.



Figure 209. *Cynodon dactylon* – Bermuda grass. This grass is fast-growing and tough since it can tolerate heat and droughts, making it sustainable in regions of tropical climates. We used Bermuda grass at all the lawn areas.



DISCUSSION

EVALUATION OF THE PROJECT

Chapter eight is a reflection of the entire project and the results. It begins by discussing the challenges of developing public space and green space in DSM. In the following section we discuss challenges of developing waterfronts into public space. Thereafter, the outcome of the design proposal is discussed around several aspects. The chapter ends by discussing further interesting research topics.

Discussion

The following discussion is an attempt to address the largest challenges that we encountered during the work with the research questions and the design proposal for Kivukoni Waterfront.

DEVELOPMENT OF PUBLIC SPACE AND GREEN SPACE IN DSM

The rapid population growth and urbanization poses a threat to public spaces and green spaces in DSM. At the same time, the population growth increases the need for public space and green space. During observations in CBD it became clear that inhabitants of DSM are in need of formal public spaces of high quality, since there is a frequent use of the existing public space and that the streets, which are not designed for recreational use, are often used for this purpose. The fact that DSM has a vivid outdoor life due to the tropical climate and the way people interact also increases the need for formal public spaces of high quality.

There are unutilized open spaces in DSM that can be developed into high quality public spaces, for instance coastal areas, areas along rivers like Msimbazi and other open spaces in the city. By designing them hence providing essential functions, making them accessible and aesthetically appealing will improve their quality and generate a positive impact of the wellbeing of people. This would improve the overall impression of DSM and also attract more tourists to the city hence benefitting its economy.

Since buildings, roads and other services are prioritized in the planning process green spaces are exterminated and are disappearing rapidly in DSM. It is important to make public space and green space a greater part of the planning process. It is also necessary to implement new laws and reinforce existing laws to protect existing public spaces from privatization, expansion of informal settlements and degradation. However, due to the lack of resources there will always be issues of financing public space developments. The public space also needs proper management in order to prevent degradation hence remaining its quality. As a conclusion, the development of public space in DSM is a slow process.

The view of public space in Tanzania and Sweden differs. Some of the stakeholders that we interviewed believed that private facilities and areas at public spaces are necessary for generating an economic income that can fund maintenance costs. This can be a threat to Kivukoni Waterfront. If the site is developed by an investor that is only interested in making money it might not be developed as an entirely public space.

DEVELOPMENT OF PUBLIC WATERFRONTS

In the search of guidelines that direct the design of public waterfronts, we discovered that there are few guidelines. Considering that we only found guidelines developed by PPS, it is difficult to make comparisons and draw general conclusions of how public waterfronts should be designed. This may have affected the result in terms of limiting the view of public waterfront design. Furthermore, some of the guidelines were

ambiguous and our interpretations might also have affected the result. For instance, it was difficult knowing whether PPS were referring to existing structures or new suggested structures.

One of the guidelines formulated by PPS, *The water itself draws attention*, indicates that the water should be the main attraction. This was difficult to apply to our project site since fresh water in Tanzania and particularly in DSM is a scarcity. We suggested different ways of coming close to the water, such as sitting steps towards the water, view points, ocean pier and boat tours. However, for these functions to work properly and to be safe and enjoyable experiences requires that the situation of SWM and pollution is improved. Removing and reducing the solid waste that is floating in the water and being washed up on shore by currents as well as reducing pollution is crucial for the development of Kivukoni Waterfront.

When designing coastal areas it is necessary to consider physical issues like coastal erosion, the tide and future flooding due to climate change. We kept this in mind when developing the waterfront, and planned for increased water levels in the future. Creating a robust sea wall that is reinforced by a retaining wall entails a resilient design that can prevent coastal erosions, manage the tide and flooding.

DISCUSSION OF RESULTS

In this section we discuss key issues regarding the design proposal and how we addressed them.

DELIMITATIONS

Even if the BRT design along Kivukoni Road has several shortcomings e.g. absence of trees, bicycle paths and crosswalks, we decided not to alter the design of the road since the BRT project posed a big economic investment. We only suggested minor changes like adding crosswalks in order to better integrate the road with the waterfront design. This had a large impact on the outcome of the design proposal. If there would have been less or no motorized traffic along Kivukoni Road, the design might have resulted in integrating the waterfront and the road rather than separating them. By suggesting a hedge and row of Date palm trees along Kivukoni Road, the road and the waterfront will be perceived as two different districts. We have also planned for reducing the traffic disturbances by placing buildings closest to the road that will act as noise barriers to achieve a relaxing environment along the waterfront.

DESIGN PROCESS

All of our experiences in DSM, from the routines of our everyday life, traveling around the city with daladala, bajaji and taxi, walking around in the CBD and our neighborhood Sinza Mori, and interacting with people in different situations, have in one way or another influenced the final design.

Our initial idea was to keep the design at a more conceptual level hence only programming the waterfront. Nevertheless, we soon realized that it was difficult not to go into detail at certain

areas. We were struggling with finding a balance between only programming the waterfront and designing it more in detail. As a result, some parts of the waterfront were designed more in detail than others.

DEVELOPING KIVUKONI AS AN URBAN AREA

We decided early in the project that we wanted to develop the waterfront as an urban area rather than a typical beach environment, for several reasons. Firstly, the fact that it is a harbor environment means it will never be a healthy place for swimming activities since the ocean is heavily polluted. Moreover, the ocean and the beach is extremely littered. Secondly, we wanted to connect the waterfront with the CBD both physically and visually, which was easiest accomplished by elevating the area. Thirdly, the site should be easy to access for everyone. Developing the site as a beach environment would mean creating terraces and stairs that would delimit the accessibility hence excluding a lot of people.

THE ISSUE OF SAFETY AND WHEN THE PUBLIC SPACE IS SOMEONES HOME

A majority of the population in DSM suffers from poverty, which has increased the number of crimes and inequality (UN-HABITAT 2009, p. 11). A high number of youths are unemployed, which leaves them idling the streets. We kept these issues in mind when developing the design proposal. For instance, we have suggested a broad variety of activities during 24 hours, hence increasing the presence of people in the area which in turn will reduce the opportunities for committing crimes. New jobs along the waterfront at the commercial businesses, markets and events can reduce issues of unemployment, which in turn will reduce urban poverty and criminality. By minimizing height differences and making the new vegetation less dense will make the waterfront easy to survey. Keeping the vegetation low and not too lush will reduce the number of hiding places. This does not automatically lead to fewer crimes, but to people feeling safer which attracts more visitors that will keep a watching eye of the waterfront. To reduce segregation we created a waterfront that turns to a wide range of target groups e.g. inhabitants of DSM, visitors and tourists of different age. We relocated the marine police to the area closest to the Zanzibar ferry terminal where homeless people are living today. The fact that the marine police will remain in the area still patrolling the ocean and Kivukoni Road is a crucial safety factor.

We believe that by developing the waterfront, the social issues may be reduced, but will still remain. We are aware that these issues cannot be solved instantly and directly by designing the waterfront, but we believe it is a step in the right direction. A program striving to prevent urban poverty introduced by for example DCC will be necessary to promote employment, youth empowerment and equality hence improving safety within the city.

THE ISSUE OF INFORMAL ACTIVITIES

There are a lot of informal activities at Kivukoni, for instance vendors selling refreshments, edibles and various items, people sleeping and even cooking and washing clothes in the area. We did not want to exclude anyone from the waterfront; it should be open to everyone. Moreover, since the issues of urban poverty and unemployment are major, we did not want to strictly prohibit vendors from using the waterfront as a place for business. Vendors tend to keep their business areas neat and tidy for potential customers. We decided to formalize the informal activities by providing space for markets. Since most of the vendors were selling fruits or vegetables along Kivukoni Road, we decided to create an open, unprogrammed space in adherence to Kivukoni Road that can be utilized for food markets. There is a recycling station nearby. The vendors have to be educated in terms of customer service, hygiene and SWM for this business to work properly.

THE ISSUE OF SOLID WASTE, POLLUTION AND VANDALISM

Only 39 percent of the solid waste within IMC was collected in 2011 (The World Bank 2012a, p. 6). It was difficult to know how to approach the issue of SWM in the design proposal. We suggested a recycling station close to the restaurant. In addition, there will be stationary garbage bins anchored in the ground located at strategic places, for instance close to the kiosks, the cafe and restaurant as well as beside benches along paths. Since we strived to create a sustainable waterfront, we decided that recycling should be introduced. Even though SWM strategies are implemented at Kivukoni Waterfront the results are highly dependent on IMC and Green Waste Pro Limited abilities to collect and dump the waste. Therefore, we cannot guarantee a waterfront that is free from littering and pollution. Yet, the design will simplify this city process. Furthermore, we believe that by developing unplanned open spaces and improving the quality of existing public spaces, people will hopefully feel a responsibility to keep the areas clean.

Mbeva⁹ enlightens that vandalism is a major problem in DSM. For instance, people have stolen parts of garbage bins, like metal parts in order to sell them. We kept this in mind when designing Kivukoni. All of the furniture and amenities are permanent, except for the furniture and amenities inside the restaurant.

THE HISTORIC AND INSTITUTIONAL BUILDINGS ALONG KIVUKONI ROAD

A question that we had to answer was how the new design proposal will fit in with the historic environments. Considering that the CBD lacks architectural coherence, we believe it is important that the waterfront is developed through its own unique identity, yet still connecting to existing city structures and buildings. However, many of the buildings along Kivukoni Road are institutional which means there were few buildings that could be connected to the waterfront. We suggested activities

at The Event Area that connect to the activities in the Lutheran Church hence highlighting the historic building. This is crucial for conserving and highlighting the cultural and historic heritage of DSM.

KIVUKONI AND THE CBD

It is important to reverse the negative trend of the CBD being deserted in the evenings and weekends, to reduce crime and increase safety. The CBD has to offer other land use than offices in order to encourage people to spend time there outside work hours. Providing more leisure activities and residential areas in the CBD will be the key strategies for reversing the negative trend. A development of Kivukoni Waterfront can be a step in the right direction for attracting people to the CBD even in evening and weekends.

THE ISSUE OF FUNDING THE PROJECT

The issue of funding will not be solved in this master thesis, since it is a problem connected to politics. However, we are aware that this is a large scale project that would be expensive to implement. Hence, it will be necessary to have external investors fund the project.

IMC does not seem to have any possibilities to invest in the project, but are planning to use PPP as a way to finance the development of Kivukoni. PPP can be used to finance public transportation networks, parks and convention centers, and can complete a project sooner or make it possible in the first place.

DART is a potential investor. They have mentioned Kivukoni Waterfront as an area that should be developed for recreation, and have even visualized some of their ideas in their report of the BRT. Another potential investor is the owner of Hyatt Regency Dar es Salaam, The Kilimanjaro. If none of these potential investors is willing to sponsor the project, then perhaps the Kivukoni project could be invested the same way as Forodhani Park; by Aga Khan Trust for Culture or a similar organization. Aga Khan Trust for Culture has been active in Zanzibar since 1989, with the objectives to restore historic buildings, housing and public spaces (Aga Khan Trust for Culture 2009).

THE ISSUE OF FUNDING FUTURE MANAGEMENT

Another issue of the project is to fund future management costs. We kept this in mind by creating a design that require quite low maintenance and by suggesting activities that can generate an income. For instance, rent collection from vendors at The Market and The Event Area will be able to fund some of the management costs. The organic waste from the recycling station can be used as fertilizer in the plantings, reducing the costs for this type of resource. Some of the existing trees along the waterfront can be replanted at the waterfront, if they are in good condition.

FURTHER RESEARCH

- For the design proposal to be implemented it will have to go through several stages of projections to define exact measurements and heights and to manage the storm water. Moreover, access to the shore has to be accommodated.
- The biodiversity of the design proposal should be investigated further. For instance, a crucial topic to explore is if the new green spaces along the waterfront are enough to compensate for the green area that was exploited. Also, the preservation of the beach's biodiversity should be investigated.
- It is vital to develop other land use than offices and institutional businesses in the CBD. Therefore, it should be investigated what other unplanned open spaces in the CBD that can be developed into high quality public spaces and how to improve the quality of the existing public spaces and green spaces. By developing spaces in adherence to Kivukoni Waterfront, like Ocean Road, a network of high quality public spaces can be created.
- The shortcomings of the BRT design of Kivukoni Road should be improved. The possibilities for introducing shading rows of trees, bicycle paths, and wider pavements should be explored.
- Improving the overall road network and reducing traffic congestions in the CBD is an urgent topic to investigate. The possibilities for introducing bicycle paths and more walkways should be explored.
- SWM and pollution are urgent topics that have to be investigated and improved in the near future. It has to be investigated further how the waste within CBD can be reduced and what parts of the waste that can be reused and recycled to a higher extent than today.

⁹Abdallah Mbeva, operational manager at Green Waste Pro Ltd, interview 22nd of April 2014.

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Lekule, T. Camilius; professor in urban planning at Ardhi University and registered architect at M.A.A.T. IAHS; senior lecturer. Interview 2014-04-17.

Mbeva, Abdallah; operational manager at Green Waste Pro Limited. Interview 2014-04-22

Mlabwa, A. Stephen; economist and director of planning at Tanzania Ports Authority. Interview 2014-03-28.

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Senna siamea. Photo: © “Cassia carnaval” by Leandro R. M. de Marco [https://commons.wikimedia.org/wiki/File:Cassia_carnaval.jpg] (CC-BY-SA-3.0) [https://creativecommons.org/licenses/by-sa/3.0/]p.70

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Figure 176. Perspective 2 – The City Park. An elongated green space featured by a classic park environment of lush plantings, flexible lawns, winding walkways with benches placed in the shade of the African tulip trees. The foreground shows the crosswalk and entrance in front of Hyatt Regency Dar es Salaam, The Kilimanjaro, with benches and small plantings facing Kivukoni Road. The background shows the ocean pier that leads to the view point, the ocean, Kigamboni and the port of DSM. Perspective created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 177. The orange dashed line shows where the detail of The Café Area is located. © Louise Candefjord and Linn Nilsson..... p.74

Figure 178. Detail of The Café Area – part of destination The City Park. Scale 1:1000/A3. © Louise Candefjord and Linn Nilsson..... p.74

Figure 179. Section E1–E2, The Café Area – part of destination The City Park. The section shows Kivukoni Road, The Mama Lishe café (an upgraded version of the former restaurant facilities that was located in this area), its outdoor dining and the tree plaza of Indian Almonds and Royal palms. Scale 1:250/A3. Section created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 180. Perspective 3 – The Mama Lishe Café and the beach promenade. At the outdoor dining the visitors can come in close contact to the ocean, since this is where the sea wall has its minimum height. The straight beach promenade creates a clear view towards the other parts of the waterfront. From this point there is also a clear view towards the Kivukoni ferry terminal. Perspective created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 181. The orange dashed line shows where the detail of The Sea Play is located. © Louise Candefjord and Linn Nilsson..... p.76

Figure 182. Section F1–F2, The Sea Play – part of destination The City Park. The section shows the shaded walkway, a part of the lawn, different play units, the roof, the elevated planting, the beach promenade and the sea wall. Scale 1:100/A3. Section created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 183. Detail of The Sea Play – part of destination The City Park. The playground was inspired by the ocean and the beach and the play units have a marine theme. Shade is provided by umbrellas, trees and a roof. The playground has a lush environment with plenty of space for both children and adults. Scale 1:200/A3. © Louise Candefjord and Linn Nilsson..... p.77

Figure 184. The orange dashed line shows where the detail of The Game Area and The Skate Park is located. © Louise Candefjord and Linn Nilsson..... p.78

Figure 185. Detail of The Game Area and The Skate Park. Scale 1:750/A3. © Louise Candefjord and Linn Nilsson..... p.78

Figure 186. The skating ramp in The Skate Park is multifunctional and can be used for both skating and as seats. Illustration created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 187. Section G1–G2, The Game Area – part of destination The City Park. The section shows Kivukoni Road, the greenery of The City Park, the elevated planting with benches around where visitors can play board games and the beach promenade. Scale 1:100/A3. Section created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 188. The orange dashed line shows where the detail of The Exhibition Area is located. © Louise Candefjord and Linn Nilsson..... p.79

Figure 189. Detail of The Exhibition Area. Scale 1:750/A3. © Louise Candefjord and Linn Nilsson..... p.79

Figure 190. Section H1–H2, The Exhibition Area. The section shows Kivukoni Road with a crosswalk, the elevated plantings with benches, the fountains, the exhibition building, the beach promenade, the view point and a part of the beach. Scale 1:250/A3. Section created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 191. The orange dashed line shows where the detail of The Market is located. © Louise Candefjord and Linn Nilsson..... p.80

Figure 192. Detail of The Market – part of destination The Food Plaza. Scale 1:750/A3. © Louise Candefjord and Linn Nilsson..... p.80

Figure 193. Perspective 4 – The Market. The unprogrammed space will serve as a food market during the day where vendors can rent a space for their tables from where they can sell local fruit and other edibles. During the evening this space will host food markets, similar to the ones at Forodhani Park, Zanzibar. The visitors can sit down and relax in the shade of the Flamboyant trees. Perspective created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 194. The orange dashed line shows where the detail of The Restaurant Area is located. © Louise Candefjord and Linn Nilsson..... p.82

Figure 195. Section I1–I2, The Restaurant Area – part of destination The Food Plaza. The section shows Kivukoni Road, the recycling station, a part of the restrooms, the restaurant building, the fountains, the tree plaza and the sitting steps towards the ocean. Scale 1:250/A3. Section created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 196. Detail of The Restaurant Area – part of destination The Food Plaza. The restaurant is located close to Kivukoni ferry terminal, to provide services for people arriving or departing with the ferry. Scale 1:200/A3. © Louise Candefjord and Linn Nilsson. p.83

Figure 197. The illustration plan displays the plant selection of the design proposal, by showing the tree species and the plant categories. Scale 1:250/A3. Scale 1:1250/A3. © Louise Candefjord and Linn Nilsson..... p.84-85

Figure 198. Plant category 1 – Groundcovers. The illustration shows the groundcover Wedelia trilobata which has been planted in the elevated planting in The Game Area. Groundcovers are characterized by their low height and being low maintenance by covering areas hence keeping weed away. Illustration created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 199. Plant category 2 – Shrubs. The illustration shows the shrub Tabernaemontana coronaria, which has white decorative flowers and shiny leaves, at The Café Area in The City Park. The shrubs are characterized by their medium to high height, which provide volume hence creating spatiality. Some shrubs can also be used as solitaires for their decorative flowers or leaves. Illustration created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 200. Plant category 3 – Groundcovers and solitaires. This plant category has been used at areas where we wanted to keep the vegetation low, but still have a few plants that add volume to the planting and provide specific values such as a unique growth habit, beautiful flowers or a certain color. Illustration created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 201. Plant category 4 – Hedges and Plant Category 5 – Climbing plants. The picture shows the hedge along Kivukoni Road and the climbing plant Bougainvillea at the Exhibition center. Hedges are characterized by their upright growth habit and are useful as spatial dividers. Climbing plants are characterized for their climbing abilities and are often used to create greenery at walls or pergolas. Illustration created by © Louise Candefjord and Linn Nilsson..... p.86

Figure 202. Plant category 6 – Lawn. Lawns are flexible since they can be used for a wide range of activities, such as sitting, having picnic, sunbathing and pursuing different types of sports and games. However, they should be used sparsely since they are high maintenance. Illustrations created by © Louise Candefjord and Linn Nilsson. The picture is built upon:

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Figure 203. List of plants and trees used in the design. The list outlines what key characteristic of each tree and plant. It also displays which plant category each plant belongs to. © Louise Candefjord and Linn Nilsson..... p.87

Figure 204. Tradescantia spathacea – Boat lily. This groundcover has thick sword-shaped leaves bound together tightly on short stems. Photo: © “IMG_1525_ Oyster Plant” by Heiko S [https://www.flickr.com/photos/hko_s/7787936094/in/photolist-abGvHv-NgGxT-abGvJX-abKmdC-abGvD2-61vpz1-nE2jvV-du5eqD-du5gr4-du5ctM-dualLd-cvQqed-f2DxX6-f1fBRX-f2F2hr-f1XkxN-f98ZCC-f3LuMs-f52Wg5-f1TXLA-f1DG3r-f1DFV6-f1D9P4-f1Tqes-f9Adi6-f7PWPJ-eZUH93-eZUGS5-eZbKVX-eZbKBv-eZ06xA-eZ06cJ-eN1feA-f9AV82-f3GpAs-f2VhVo-f1vtks-f1zxE8-f1PPB5-f8Ttge-f7PVK3-f7zGtv-f7SykC-f45FwH-f3vQJ4-f3rNkz-f3rDip-f7W8yW-eMrDjQ-cScd5f] (CC BY) p.87

Figure 205. Nerium Oleander – commonly known as Oleander. Can be used as a shrub and a solitary. It has a decorative pink flowering which makes a nice contrast to the blue colored leaves. Photo: Photo: © Louise Candefjord..... p.87

Figure 206. Tabernaemontana coronaria – Crape jasmine. This shrub has decorative white flowers and shiny dark green leaves. Photo: © Linn Nilsson..... p.87

Figure 207. Murraya paniculata – Orange jasmine. This plant has been used as a hedge along Kivukoni Road because it is dense and has a lush bright green color. Photo: © Louise Candefjord..... p.87

Figure 208. Bougainvillea glabra – Paper flower. Bougainvilleas are popular ornamental plants which have decorative flowers. It has been used at the pergola in The Exhibition Area and on the wall at the exhibition building. Photo: © Louise Candefjord..... p.87

Figure 209. Cynodon dactylon – Bermuda grass. This grass is fast-growing and tough since it can tolerate heat and droughts, making it sustainable in regions of tropical climates. We used Bermuda grass at all the lawn areas. Photo: © Louise Candefjord..... p.87

Appendix: Interview questions

This appendix displays the most important target groups we interviewed and a sample of what questions we asked.

BASIC QUESTIONS FOR ALL INTERVIEWEES

Name:

Age:

Profession/Occupation:

QUESTIONS TO VENDORS

How often do you spend time at Kivukoni?
For how long have you been doing business here?
Why did you choose this place for your business?
Which time during the day are you here?
How many customers do you have per day? What kind of customers?
How do people use Kivukoni? What kind of activities have you observed at the waterfront?
Has the site been utilized in a different way through the years?
What is your connection to Kivukoni? Do you do anything else here besides work?
What do you like and dislike about Kivukoni?
What do you think is missing and what shall be improved at Kivukoni?
What is your opinion of making your business more formal to improve conditions for the street vendors?
What is your perception of the safety in this area?
Have you been exposed to any crimes?
What do you do with the waste you produce?
What is your perception of the traffic situation along Kivukoni Road and other connecting streets?
What future possibilities do you see for Kivukoni?
Where do you go for recreational purposes in DSM?

PEOPLE HANGING OUT

Different target groups

What do you do for a living?
What is your connection to Kivukoni?
How often and why do you spend time at Kivukoni?
What do you do at Kivukoni?
What do you like and dislike about Kivukoni?
What do you think is missing and what shall be improved at Kivukoni?
What future possibilities do you see for Kivukoni?
Where do you go for recreational purposes in DSM?

WORKERS AT MAMA LISHE

For how long have this business been established?
Who owns the facilities?
What services does Mama Lishe offer? Restrooms?
Is the current location good for restaurant businesses?
What kind of employees work at Mama Lishe?
How many customers do you have per day? What kind of customers?
What does the NGO sponsor with?
What could be done to increase the amount of customers?
Where do you purchase the commodities that you use when cooking?
Who maintains the area?
Where do you dispose the waste that is being produced?
What is your perception of safety in this area?
What kind of activities do people pursue at Mama Lishe?
Do you come here for any other purposes than work?
How do you use the Mama Lishe area and Kivukoni area?
What kind of improvements do you wish for Mama Lishe in the future?
What do you like and dislike about Kivukoni?
Which future possibilities do you see in Kivukoni Waterfront?
Where do you go for recreational purposes in DSM?

HYATT REGENCY DAR ES SALAAM, THE KILIMANJARO

Person interviewed: Rukia Chuma, Sales Manager

What kind of activities and services does the hotel offer?
What are the opening hours?
What kind of customers do you have? What nationalities?
Which time of the year do you have most customers?
What do you think about the location of the hotel?
Advantages and shortcomings of the location?
Is there any disturbances from the surroundings?
What does the customers think about the waterfront?
Does the hotel owner have any plans to develop the waterfront in the future?
What kind of development does the hotel want for the waterfront?
What impact will the BRT-system have on the hotel business?

DAR RAPID TRANSIT AGENCY

Person interviewed: Asteria Mlambo, Urban planner

What is the background of implementing the BRT system?
What are the advantages and shortcomings with the BRT-system?
In what way is the BRT-system sustainable?
What actions have you done to prevent coastal erosion along Kivukoni Road?
Will bicycle paths and walkways be implemented?
Kivukoni Road will be a high capacity road, how will pedestrians cross it?
Why do you consider it necessary to implement the BRT along Kivukoni Road?
Why are there so many lanes planned along Kivukoni Road when there is so little space already?
In the report it is mentioned that the waterfront should be developed for recreational purposes, how does that work with the traffic?

ILALA MUNICIPAL COUNCIL

Person interviewed: Emmanuel Richard, Town planner

What plans do you have concerning the future development of Kivukoni Waterfront?
What plans do you have regarding the restaurant facilities established at the waterfront today?
Who owns the waterfront?
What is your perception of the safety at Kivukoni?
What is your opinion regarding the implement of the BRT-system?
Why do you think that Kivukoni should become a public space for recreation?
Kivukoni has been used for recreational purposes in the past, why is that not the situation today?
What kind of development do you think is appropriate for the waterfront?
What would it mean to DSM if the waterfront area would be developed into a recreational space?
Which policies do we need to address when developing the waterfront as a public recreational space?