

DAILY MIGRATIONS IN A SHIFTING LANDSCAPE

facilitating a circular economy on the south peninsula

Master of Urban Design Research Project

Emma MacArthur

MCREMM001

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DAILY MIGRATIONS IN A SHIFTING LANDSCAPE:
facilitating a circular economy on the south peninsula

Emma MacArthur

MCREMM001

Submitted in partial fulfillment of the Master of Urban Design Degree

60 credits

29 November 2023

Supervisor Dr Kathryn Ewing

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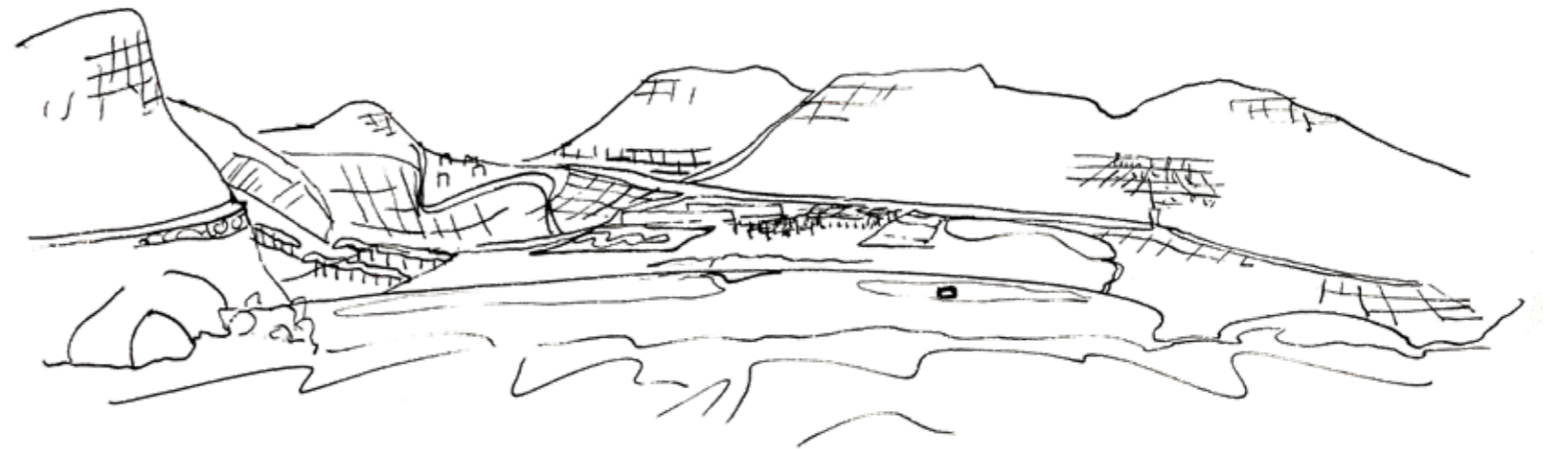
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ABSTRACT

The Noordhoek Valley encompasses the residential areas of Noordhoek, Masipumelele, Sun Valley, Ocean View and Kommetjie. The valley is emblematic of the challenges and opportunities present at South Africa's urban fringe. The valley is dominated by natural systems, with settlement pinched between fragments of a national park, and the dramatic topography of the mountains and ocean. As a resident of the area, I have noticed this sleepy corner of the greater Cape Town Metropolitan area move through the quiet desperation of the COVID-19 pandemic and into a highly desirable semi-gration destination. This residential boom is dramatically changing the social character of the communities and is revealing the spatial pressures this new density is placing on the sensitively balanced urban and natural systems. This research project investigates these pressures in an in-depth study of the valley. The project produces an intervention to lay the foundations for an adaptable framework plan to meet the demands of the coming developments. This is achieved through a multi-pronged strategy focused on concepts of perforating spatial divisions and shifting conditions in order to facilitate dynamic future development.



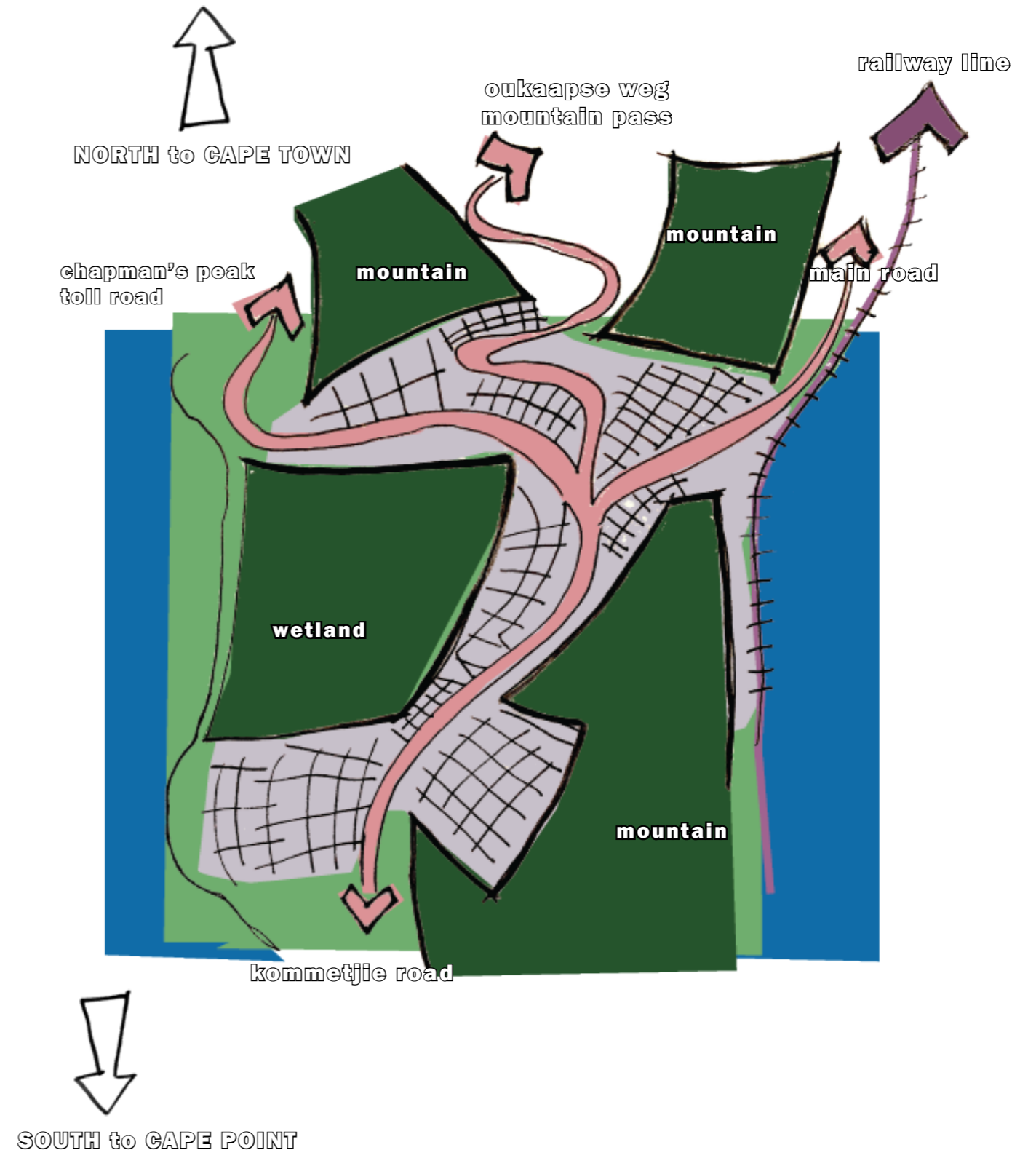
community will • self-improvement • sense of place • circular economy • self-determined • conflict • ecology • volatile • scale

CONTEXT MATERIAL CONTEXT concerns for the urban periphery

There are increasing concerns on a global scale regarding issues of rapid urbanization, the climate crisis, and economic resilience. Our contemporary world has recently seen numerous global crises which have shocked society on unprecedented economic, environmental and social scales. Roy (2011) sets forth a new urban vocabulary to describe the realities of southern cities. Her term urban peripheries is defined as both the territorial and social site outside of the norm. The periphery is a conceptual device that encompasses any and all sense of difference, transcending territory, location or distance. This identifies the parts of urban life which remain outside the norm, and therefore outside the capacity of normative urban practice to service and improve. Thus, new and innovative strategies are needed for addressing the critical local processes of urban sprawl, environmental encroachment, and economic diversification.

The Noordhoek Valley occupies the southern extremities of the peninsula, separated from the Cape Town CBD by dramatic topography. Currently, it faces environmental pressures where residents come into conflict with Table Mountain National Park (TMNP), and development pressures where the City of Cape Town's primary spatial development framework goals center on development strategies inappropriate for the sensitive local context. The urban fabric has developed over time as farmland has been sectioned off for various

commercial, residential and industrial developments. The desirable land suitable for development is wedged between the South Peninsula's mountain range and the vast wetland system at the center of the valley. The areas now form segments of the patchwork layout of the Table Mountain National Park. This has resulted in a pressured urban environment with residential areas and commercial hubs under strain from densification and inadequate transit infrastructure. This project will address these concerns through an application of theory onto spatial and social data.

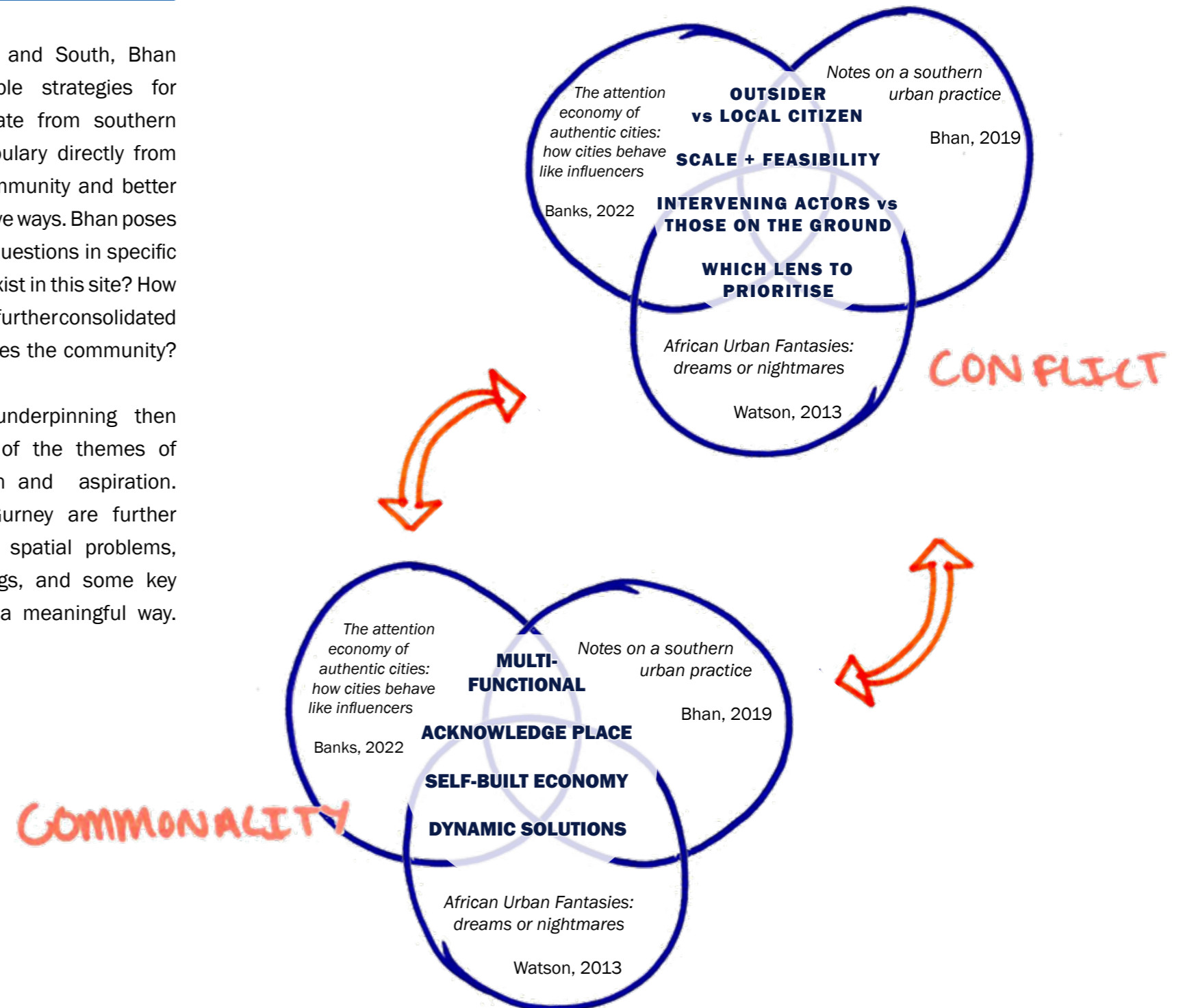


CONTEXT THEORETICAL CONTEXT cues from literature

In researching for this project, I have focused my attention on texts dealing with spatial character, southern urban strategies, and case studies which examine the increasingly homogeneity of African urban development proposals/projects. Spatial character can be an essential component of a community's identity, and often a local economy is formed around this identity. Banks (2022) explores the relationship between spatial identify and economic competitiveness that can create financial prosperity in otherwise industrially insignificant communities. Banks proposes a new phase of city design and implementation through his concept of the City Authentic, which links manufactured identity and authenticity directly to the rejuvenation of Rust Belt towns in New York State. Despite apparent economic success, Banks flags this authenticity production as a new kind of urban homogeneity that transforms unique spatial characteristics into a set of signifiers of uniqueness that end up flattening these communities. This warning of homogeneous progress is also flagged by Watson (2013) in her analysis of the linguistics of newly imagined African future cities. She posits too that there is a repetitiveness in the declarations of cities across the continent. There are consistent announcements of new, glimmering smart cities, eco-cities and satellite cities. Yet their reality is a closed system separate from their existing contexts, further isolating the upper classes from the rest of their urban systems. Despite these worrying

trends in both the global North and South, Bhan (2019) provides some actionable strategies for producing solutions that germinate from southern theory. He develops a new vocabulary directly from his context, to understand his community and better intervene in meaningful and sensitive ways. Bhan poses a process that could ask relevant questions in specific contexts. What strategies already exist in this site? How are they effective? How could they be further consolidated towards a network that better serves the community?

This introductory theoretical underpinning then leads to a further exploration of the themes of vocabulary, strategy, collaboration and aspiration. Roy, De Boeck, Pieterse and Gurney are further deployed as tools for unpacking spatial problems, their routes in institutional failings, and some key strategies for moving forward in a meaningful way.



CONTEXT THEORETICAL CONTEXT cues from literature

Roy, De Boeck, Pieterse and Gurney can be placed in conversation with Banks, Bhan and Watson to develop a theoretical framework from which a practice can start to emerge. Roy (2011) introduced new categories for understanding southern urbanism, namely **peripheries, urban informality, zones of exception and gray spaces**. Of particular significance for this project is this new definition of **peripheries** as being parts of the urban landscape that are both on the physical and societal fringe.

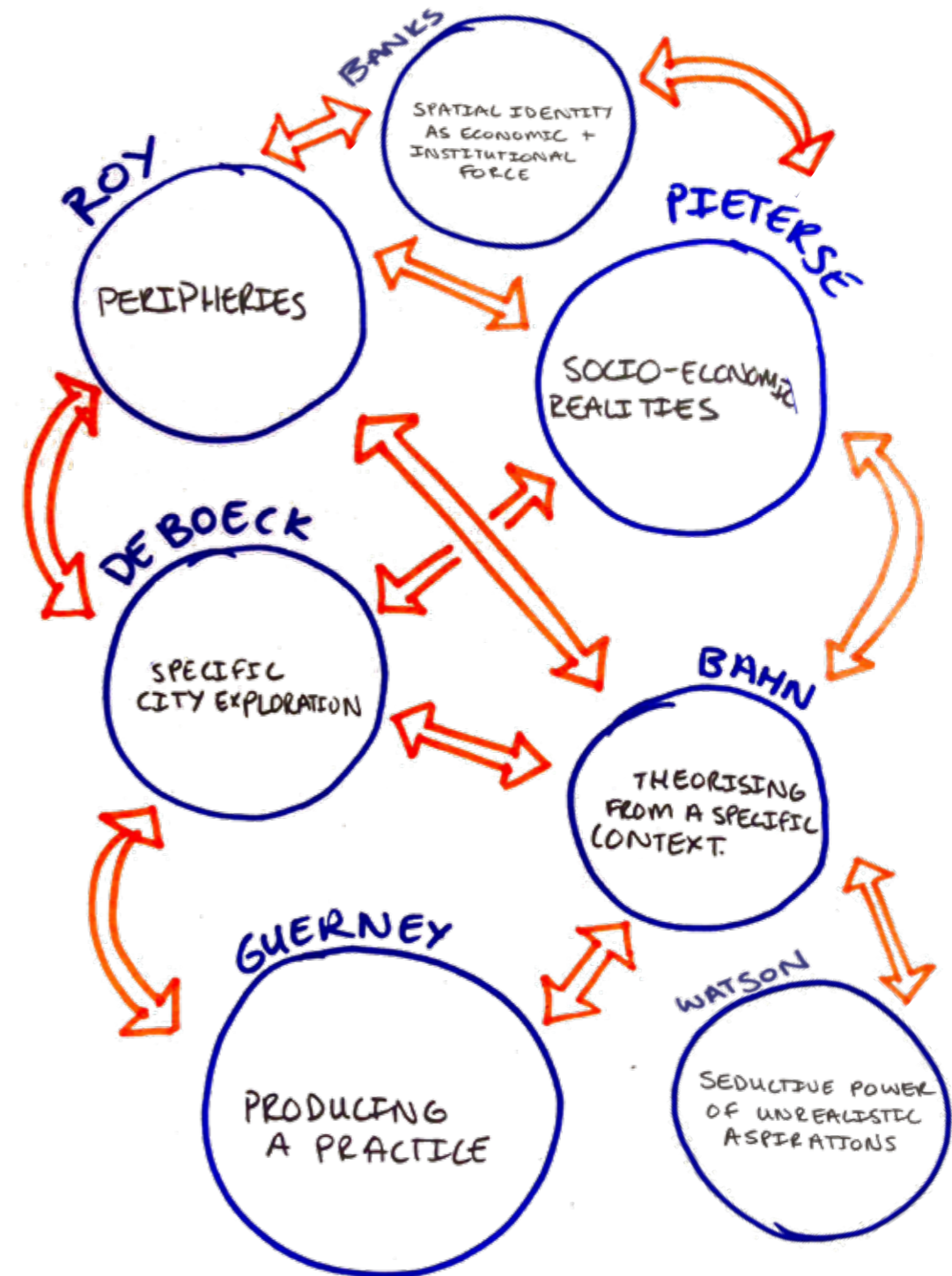
De Boeck (2011) provides a multi-layered analysis of Kinshasa's patchwork of urban processes in *Spectral Kinshasa*. The text uncovers the ramifications of the colonial past, as well as worrying realities being perpetuated by aspirational but unrealistic urban developments proposed for the city. He also explores the adaptive approaches of poor, under-serviced neighbourhoods, particularly the re-ruralisation process occurring at the urban fringe. Impoverished residents are able to eke out a living by cultivating rice paddies on the boggy wetland edges of the city.

Pieterse and Simone (2017) provide a quantitative set of demographic data that is unpacked to reflect the growing precarity of the global processes acting upon African economies

and populations. They reveal the reality of a complex equation of slum prevalence, infrastructural deficits and hard resource constraints, which work to cripple institutional possibilities for formal urban solutions.

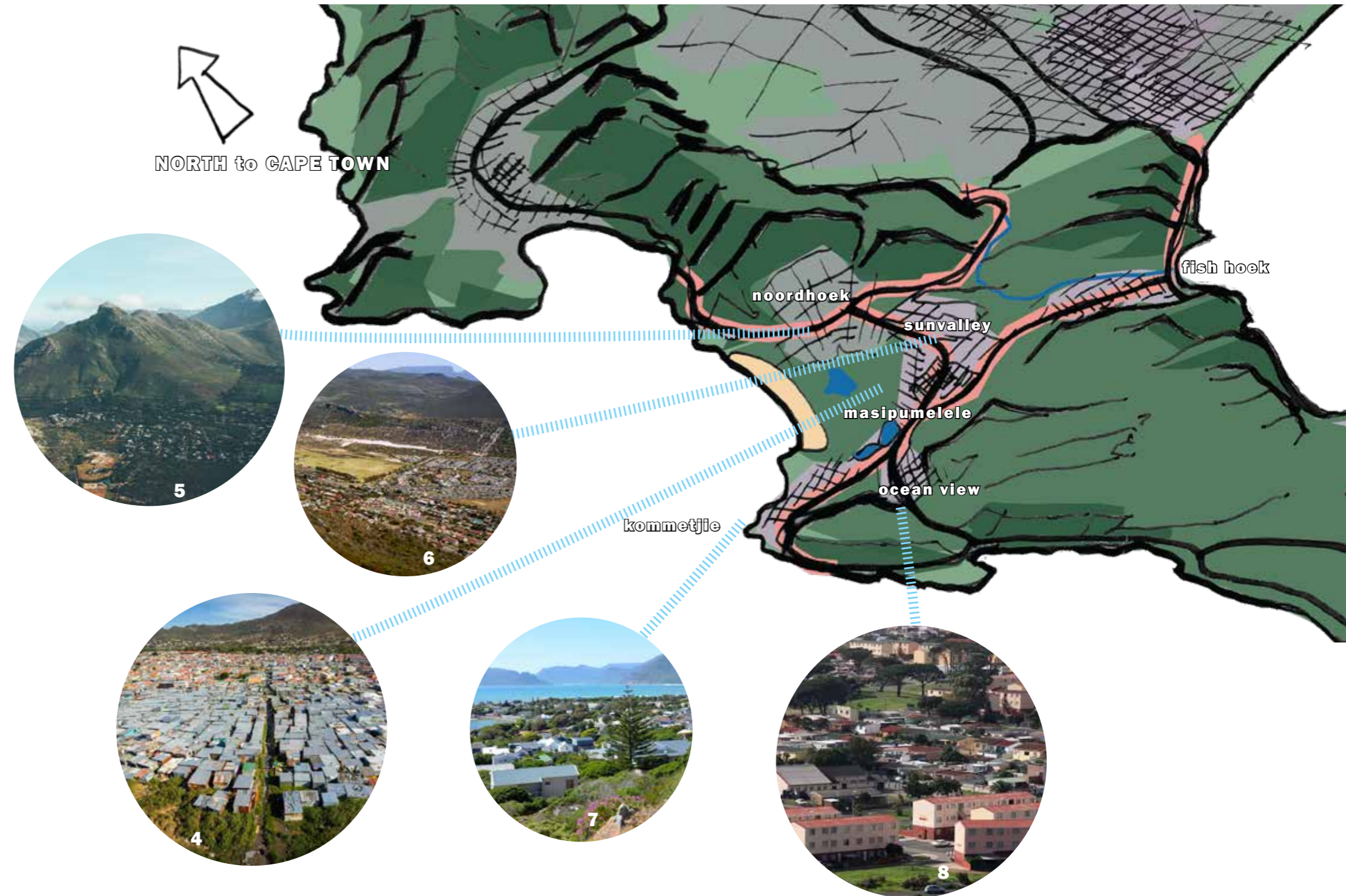
This failure of states to provision communities with both hard and social infrastructures is proactively addressed in Gurney's writings on her project *Panya Routes*. She reveals correlations between urban innovations, social forms and artistic strategies. She develops an iterative approach for visiting and revisiting a project, place or concept. In particular, her concepts of **flux** and **elasticity** are essential for developing a project that can successfully adapt to the shifting realities of southern urban life.

These 4 texts, combined with the analytical and theoretical approaches of Banks, Bhan and Watson, begin to reveal a framework for thinking through theory. All the above authors acknowledge that **urban success stories** are made from **flexibility, sensitivity, site-specificity, and collaborative approaches**. While there are some tensions between these texts, ultimately they form a set of principles and methods that can reveal a meaningful design outcome from this research project.



CONTEXT LOCAL CONTEXT the valley

The past 4 years have seen a shift in the daily rhythms of life in the Noordhoek valley. As a resident, civic volunteer and small business manager, I have made a number of observations as the local communities have battled to survive the economic and social repercussions of the COVID-19 lockdowns. I have also watched as the rural suburb of Noordhoek has become increasingly popular as a residential destination for the wealthy, while the work from home revolution has allowed the middle class to retreat away from the CBD and surrounds to the suburbs of Sun Valley, Fish Hoek, Kommetjie etc. This perspective of desirability and soaring property values does not accurately reflect the reality of disjointed experiences of local communities. The residential boom produced by subdivision of rural properties and wetland encroachment by informal housing has increased the local population density. This has therefore lead to increasing pressure on local transit networks as traffic circulates within the valley and moves north across the mountains to the CBD. This has also resulted in increased pressure on natural systems from residential sprawl, and the narrowing of prior green corridors due to the rural subdivisions.



CONTEXT LOCAL CONTEXT the valley

- legend:
- SANPARKS Table Mountain National Park
 - urban fabric
 - commercial agriculture
 - open space
 - perennial water bodies
 - beach
 - main connector route
 - railway
 - road
 - perennial river
 - potential medium density development
 - potential low density development
 - approved new development
 - active street edge
 - mixed use local node
 - high NMT route
 - scenic drive
 - place of worship - mosque
 - place of worship - church
 - medical centre
 - police station
 - education
 - restaurant/cafe

The following map demonstrates the extent of and significant spatial elements of the Noordhoek Valley. The study area so far encompasses a framework scale investigation of a number of diverse communities.

This map demonstrates the dual function of the SANPARKS Table Mountain National Park border as both the nature reserve's boundary and the hard edge for future urban development. Despite these restrictions there is still spatial capacity in the area for future development.

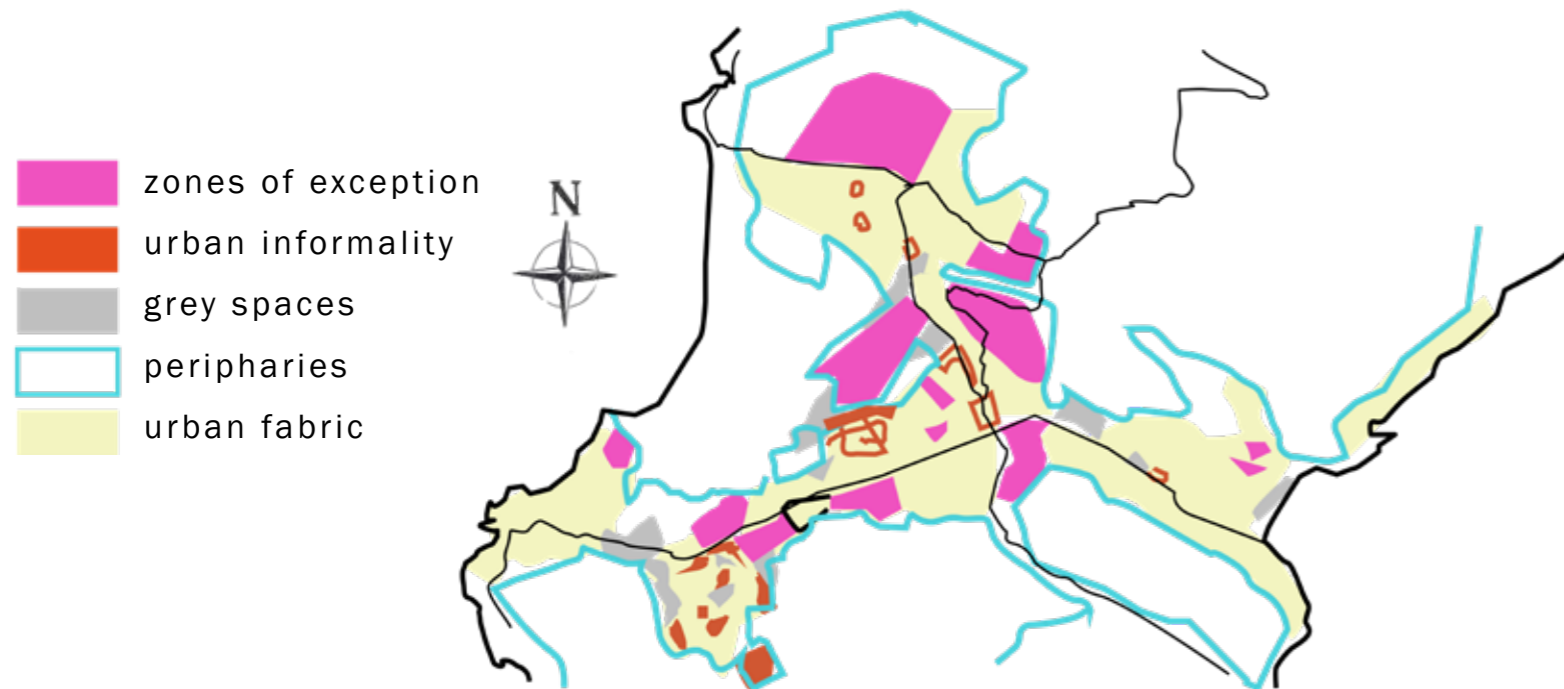


EXISTING NOORDHOEK VALLEY and CONNECTION through to FISH HOEK

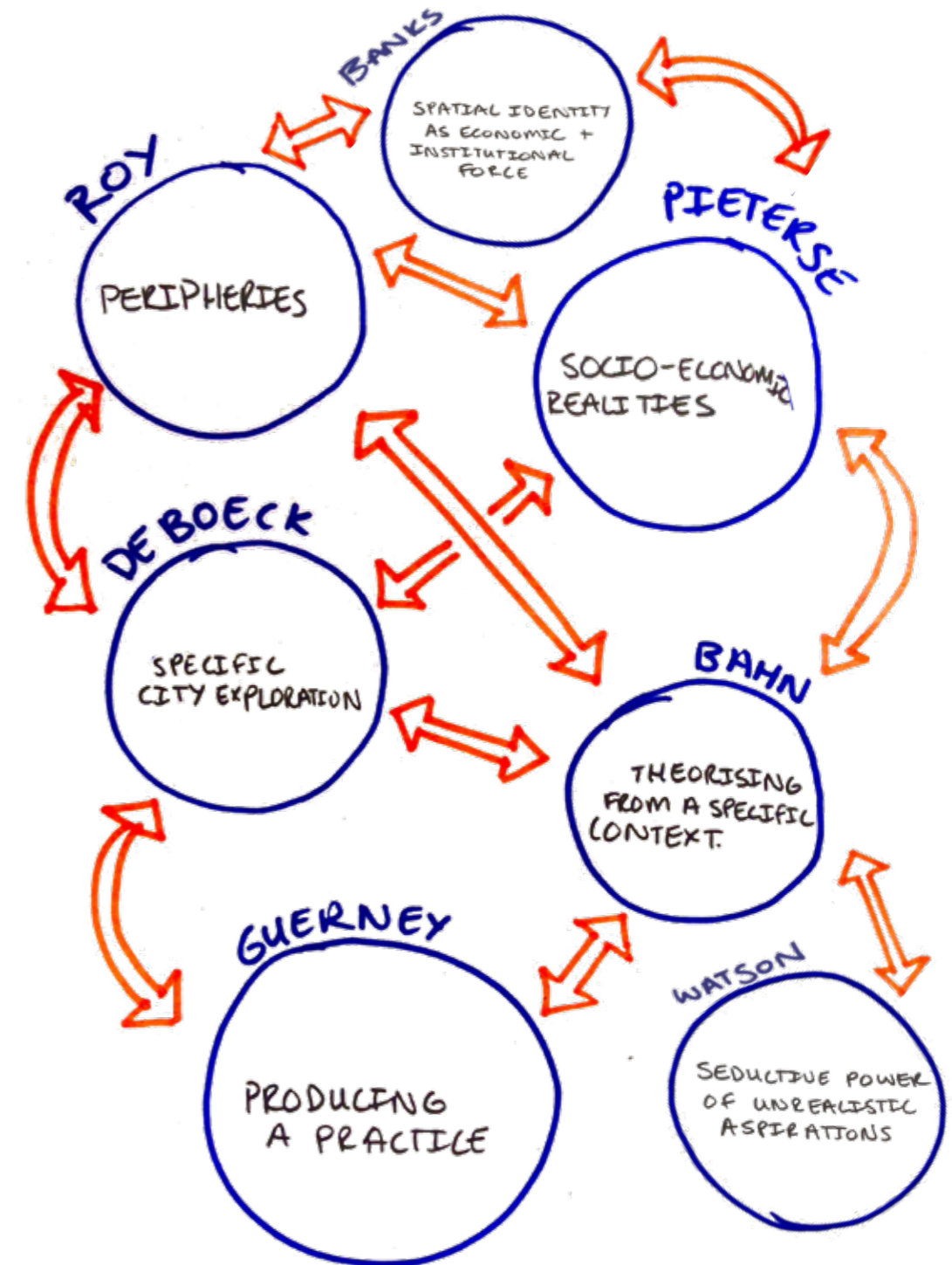


CONTEXT THEORY AND SITE

The Noordhoek Valley, and further the South Peninsula, is exemplary of many of the features of Roy's categories. On both a territorial and social fringe, the site is dislocated from the urban core. Within it are nodes of urban informality and middle class zones of exception. There is also a patchwork of gray spaces scattered in between. Pieterse reveals the complex global processes exemplified in the shifting financial and demographic realities in the area. There is a clash of rural sub-divisions that produce homogeneous suburbia, while urban informality pushes for a re-ruralisation process that threatens local ecology. Watson and Banks' warnings against the seductive powers of development propositions are also evident in the rapidity of approvals given to residential expansion proposals. Yet, there is still under-servicing across the entire valley, with its vibrant communities all teetering atop fragile, aging infrastructure. All this demonstrates the entry point for an intervention that Bhan has used in his context. By deploying Bhan's adaptive theoretical process and Gurney's sensitive approach to collaborative creative projects, this project aims to develop a series of design interventions that can begin to address these problems. By intervening strategically and considerately, the project fosters a greater sense of community identity within a spatial character that is more representative of all the area's residents.



deploying Roy's categories onto the Noordhoek Valley



to transform from the REAL to the IDEAL



BIND together a resilient community that remains stable and secure in a turbulent urban landscape



REBOUND conflicts + tension produced by theory, research, and local perspectives to shift design solutions



REINFORCE spatial character and personal visions for a distinct community



TEAR into rich resources available through community organizations and oral histories



RESTRAIN the inquiry to the realities of circulation of people, economies and natural systems

APPROACH the valley and me

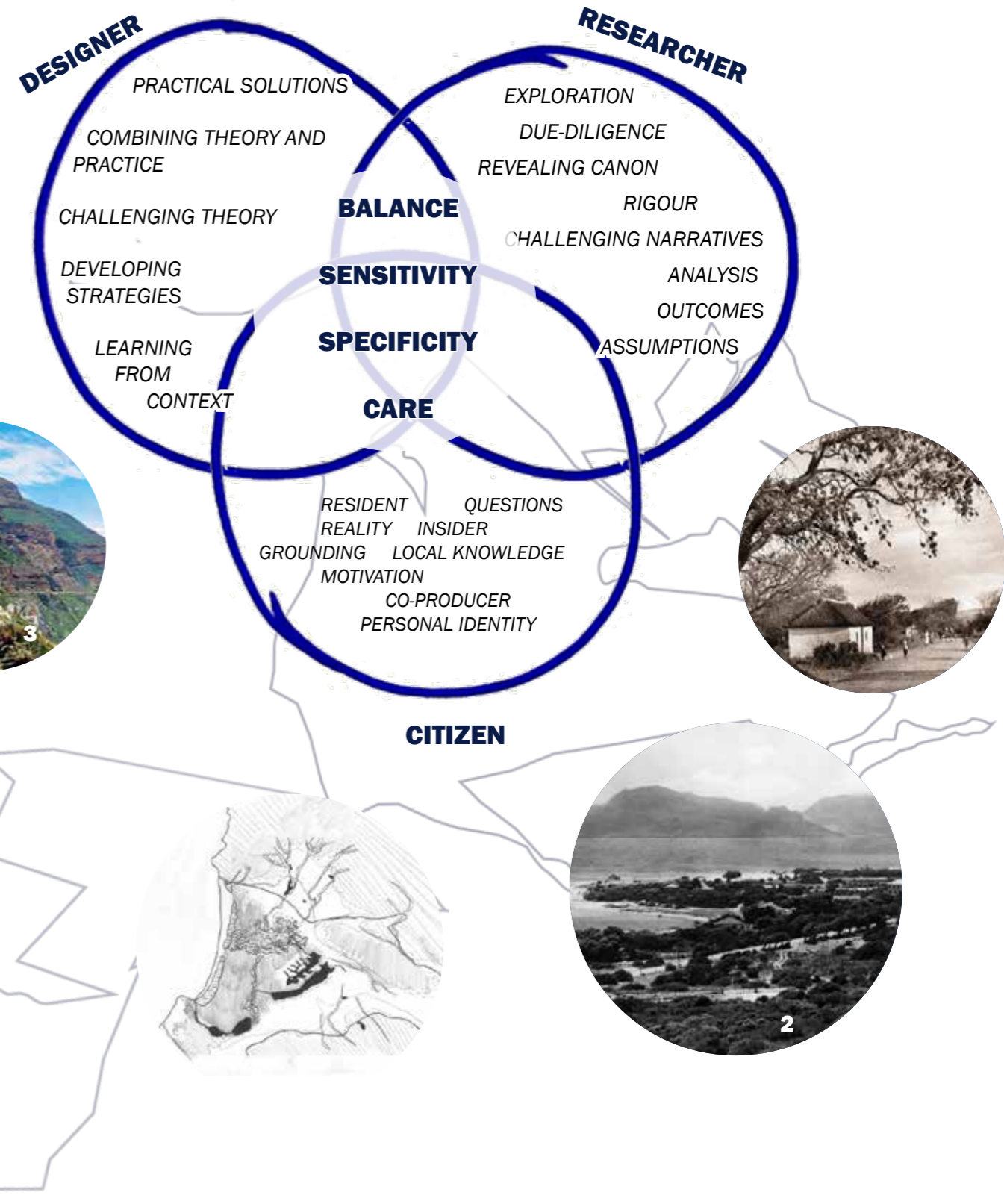
I bring 3 core roles into this project: the professional Designer, the Researcher and the Citizen. I have come to know the Noordhoek Valley and its community over the past few years as a resident, civic volunteer, and small business manager. I bring my own personal biases from my experience as a resident, and these must be set aside in order to conduct efficient and thorough research. My academic background in Fine Arts and landscape architecture brings with it a few different lenses with which to view the research. Fine art brings an individualised, empathetic lens to view the perspectives of individual community members. It also harbours a fundamental appreciation for the aesthetic character and scenic beauty of the area. My landscape architectural training is useful as spatial design tools in this ecologically sensitive area, however it does predispose me to approaching spatial issues from an environmental point of view. I am encouraged that an ecological lens is absolutely necessary here, as past proposals for infrastructural development has been halted by the very active local environmental action groups. My current blind spots entering the project is an in-depth understanding of the challenges faced by residents of Ocean View and Masipumelele. With a history of forced removals and informal land occupation respectively, they both offer rich perspectives on current issues faced.

As a **Professional Designer**, I can provide people skills and organizational lessons learned through my work in professional environments. This includes data management, deadline managements and presentation skills.

As a **Researcher** I can bring an understanding of the theory of urban studies that both defines my research approach and has lead to the current urban conditions on site.

As a **Citizen** I have brought my personal local knowledge, connections and experiences to this proposal. My role as citizen is the underlying motivation for choosing this study area, and identifying potential areas for intervention.

Going forward, I will primarily deploy the Researcher lens while conducting the research for this project. Following this, an interchanging approach between Researcher and Designer will allow me to develop a project that addresses the concerns raised as a Citizen.



Daily migrations in a changing landscape – how can an urban design intervention facilitate a circular rural economy on the south peninsula?

Development of a research question for this location has been a process followed through an examination of theory in order to address the following themes:

These categories develop the following lines of enquiry to underpin the main research question:

Spatial character and economy

How is Noordhoek “branded”? Is this reflective of its actual daily realities? Who does this image serve? Is it beneficial to local economies, planning decisions, environmental concerns and social structures? How do current development trends and spatial (mis)uses support or undermine current spatial character?

Existing strategies, networks and conditions

What strategies already exist in the valley to address your observations/questions? How are these effective? How can they be further consolidated towards a network that better serves?

Innovative problem-solving

How would one channel this imaginative problem solving approach to a southern context? To a south African context? To a context on the south peninsula where we have settlements and industry fragmented by a patchwork of inhospitable topography and volatile ecology?

Meeting human and environmental needs

Innovative design that can serve human needs while conserving local ecology is particularly significant here where previous infrastructural upgrades are consistently halted due to ecological concerns.



How do we reconcile spatial justice and retaining spatial character in urban systems that cannot support the developments proposed by the powers that be? How can a community hold onto its principles while preparing for an uncertain future? These questions are not just limited to this specific site, and this project aims to reveal answers in this context that may assist other communities facing similar challenges.

METHODOLOGY road map to research

(re)VISIT

The project takes an iterative approach with flux and elasticity as the core tenants of both its process and its outcome. The methodology draws from Kim Gurney's strategies described in her Panya Routes project. She generates concepts of **horizontality**, **second chance**, **performativity**, **elasticity** and **convergence** in order to reframe her approach to knowledge generation in a global south context. These are generated by finding correlations between artistic practice and existing everyday urban innovations. This project deploys some of these concepts from Gurney's working principles of art spaces to create actionable research steps which can be followed in order, or revisited at any time throughout the process. This changeable ordering of actions allows the project flexibility while working across a variety of micro-contexts within the greater study area. An iterative approach is essential to grappling with the rhythms of the context and producing a valuable enhancement of the Noordhoek Valley.

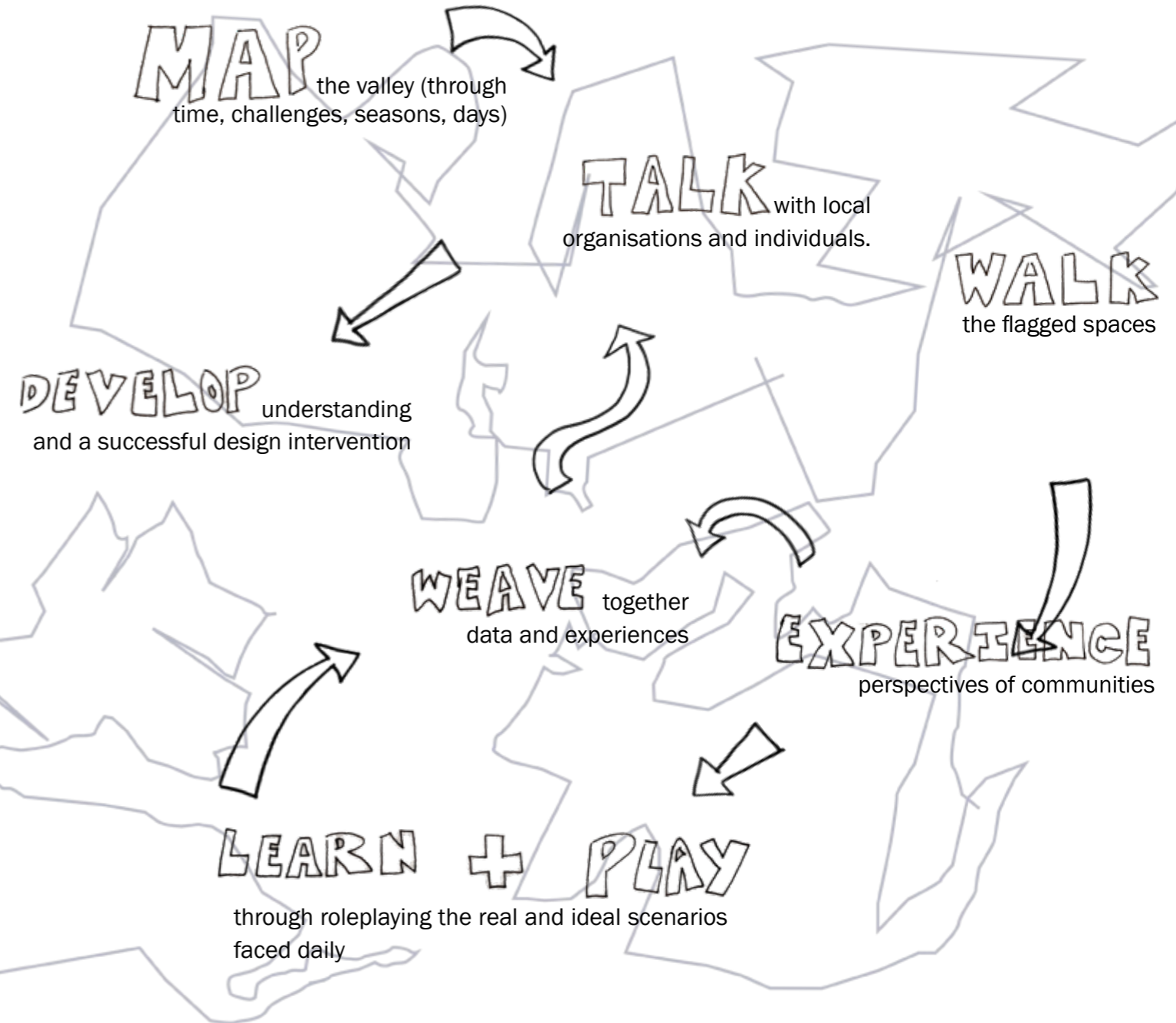
horizontality community building

second chance upcycling

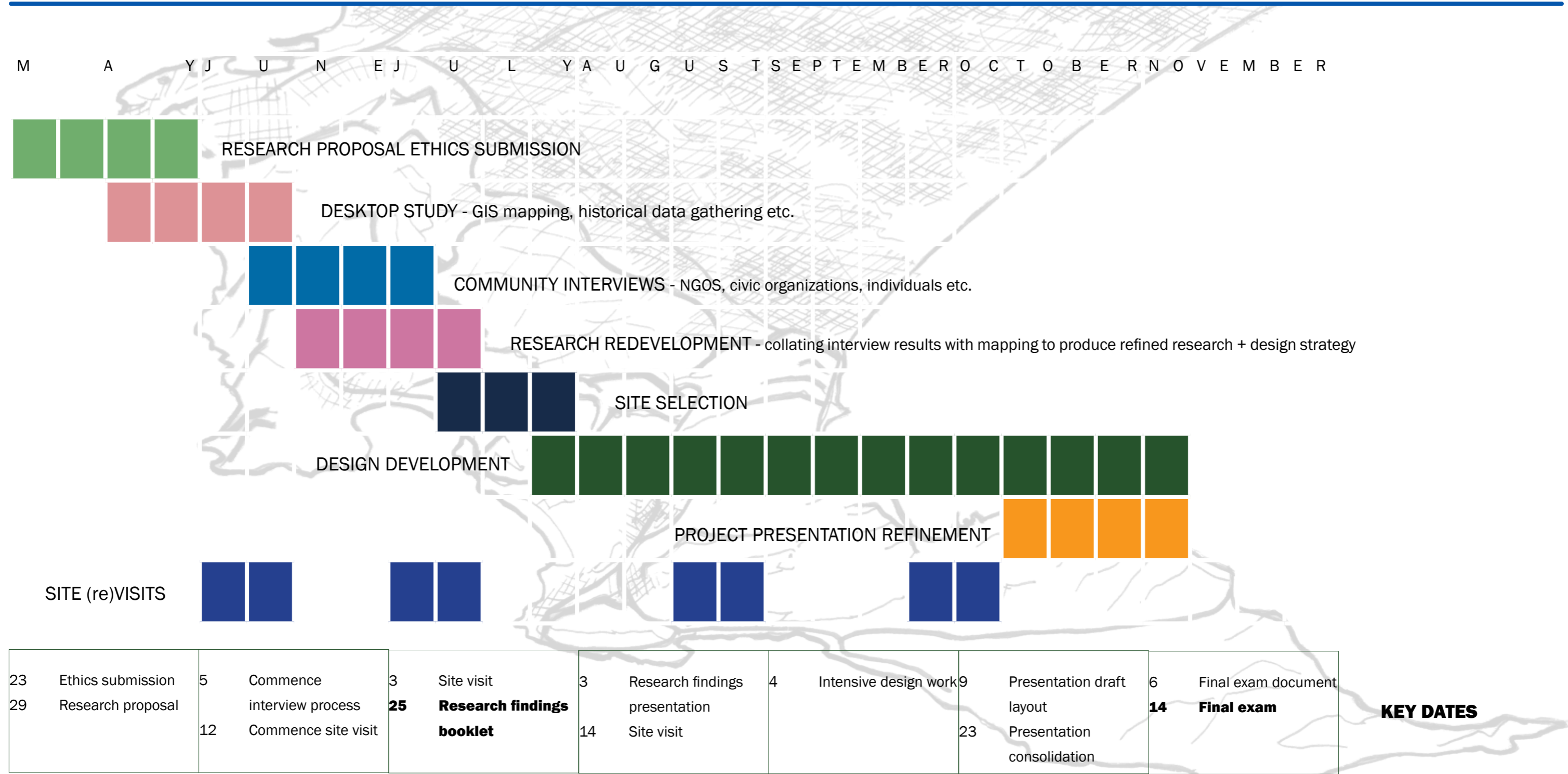
performativity doing things with art

elasticity responding to context

convergence creating a desired tomorrow, today



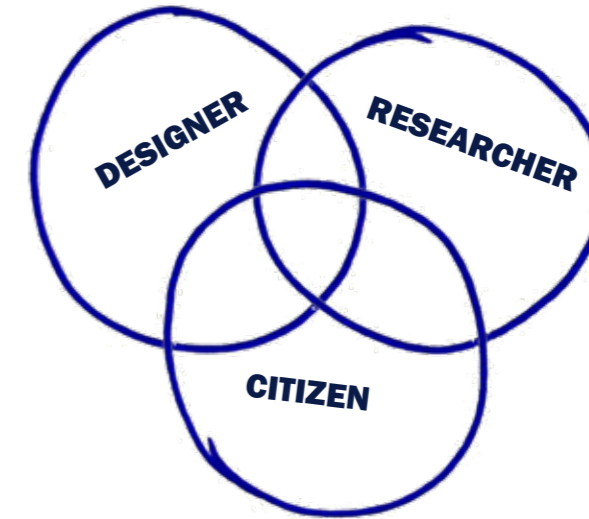
METHODOLOGY research programme



KEY DATES

METHODOLOGY ethical considerations

This research proposal has been developed out of a set of personal observations as the resident of the local community. The researcher brings 3 identities forward into the project: the Professional Designer, the Researcher, the Citizen. The project will primarily deploy the Researcher's lens while operating within the site. The research methodology includes interviews with individual members of the public and civic organisations. The research will also involve a series of site visits across the study area, both guided by a local expert and solo outings of the researcher. The project will be conducted with utmost care and respect for the communities and natural environments represented in this research.



Risks

- Potential conflict of interest as the researcher is a local resident who manages a small business that is dependant on the spatial character set to be studied in this project.
- For the purpose of this project, the researcher solely identifies a student at the University of Cape Town, and will engage in research activities deploying this lens.

Documentation

- The research will be conducted in the public realm.
- **Photographs** used will be of scenery on site, including but not limited to: buildings, streets, natural environments, public open space, facades
- **Audio recordings** will only be of general ambient sound, unless an individual has given permission for their specific voice to be grounded.

Walk-about

- Walk-about and site visits will be led by a local expert, be they a community leader, civic organiser, environmental scientist etc.
- These visits will remain in public space, unless granted permission by owners and residents to enter private property.
- Walk-about will not actively interfere with any individuals, events, animals, or environment encountered on site.

Interviews

- Only adults over the age of 18 will be interviewed. Any request for anonymity, whether during the interview or at any time after, will be respected and upheld.
- All interview subjects will need to complete an informed consent form. They will be provided with a contact card should any later queries or concerns arise.
- Permission must be granted for any audio recordings.
- Interviews will follow themes of public space, transit infrastructure, and environmental concern/awareness. Questions are detailed on the following page.

METHODOLOGY reflections

(re)VISIT inspired by Gurney's *Panya Routes*

how far did i get in the first visit...

There were some unexpected complications during the research project, including but not limited to my personal ability to connect with people, communicating my ideas, and criminal activity that put a hold to my plans for walking and spending significant time on site.

challenges...

- SAFETY - walk was not possible
- engaging directly with individuals - gaining trust
- timing
- interviewees seeking anonymity/fear of the "clipboard"

successes...

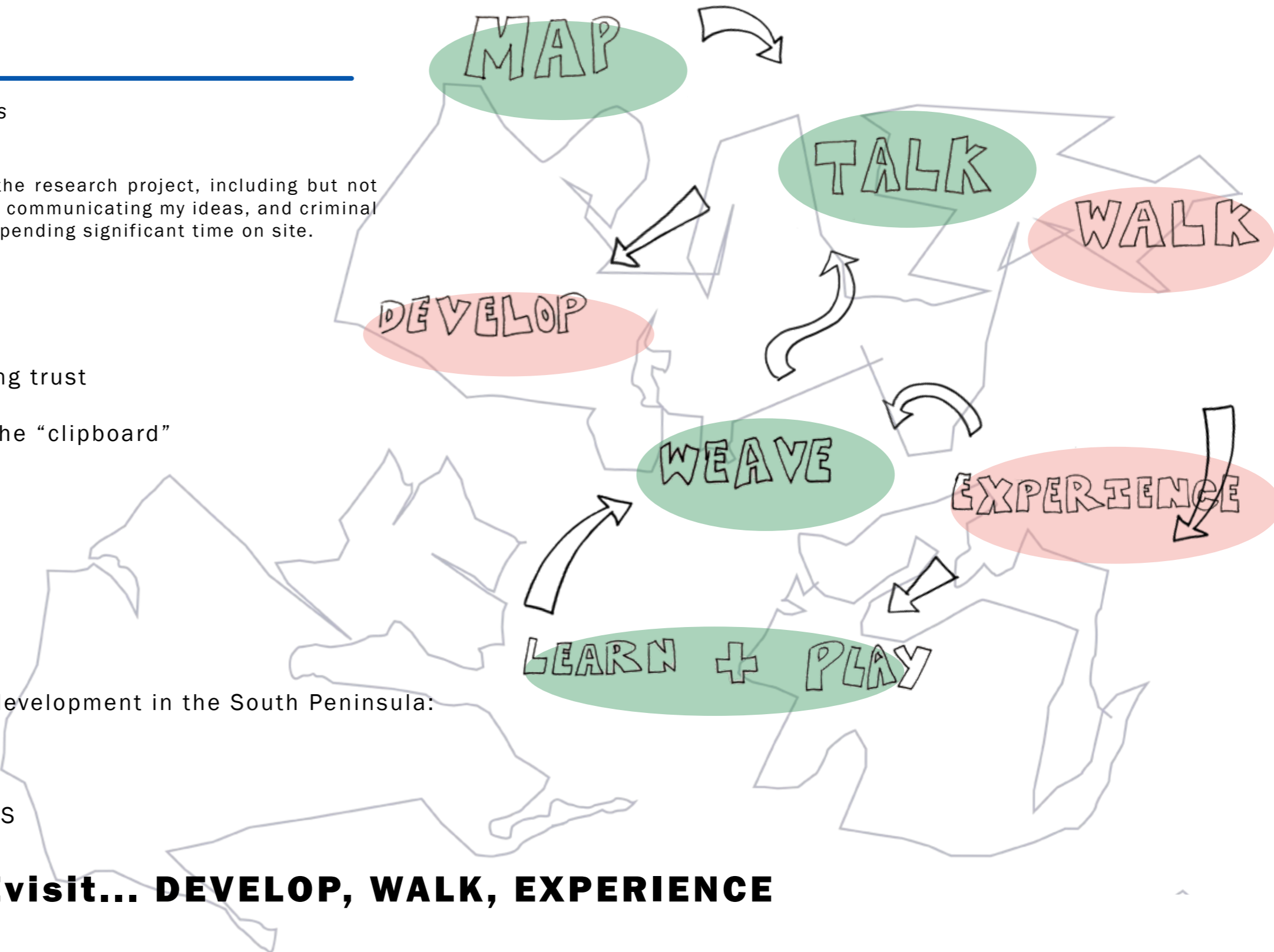
- accessing local, crowd sourced archives
- gathering perspectives
- digital resources and data
- repackaging info through roleplay

revelation...

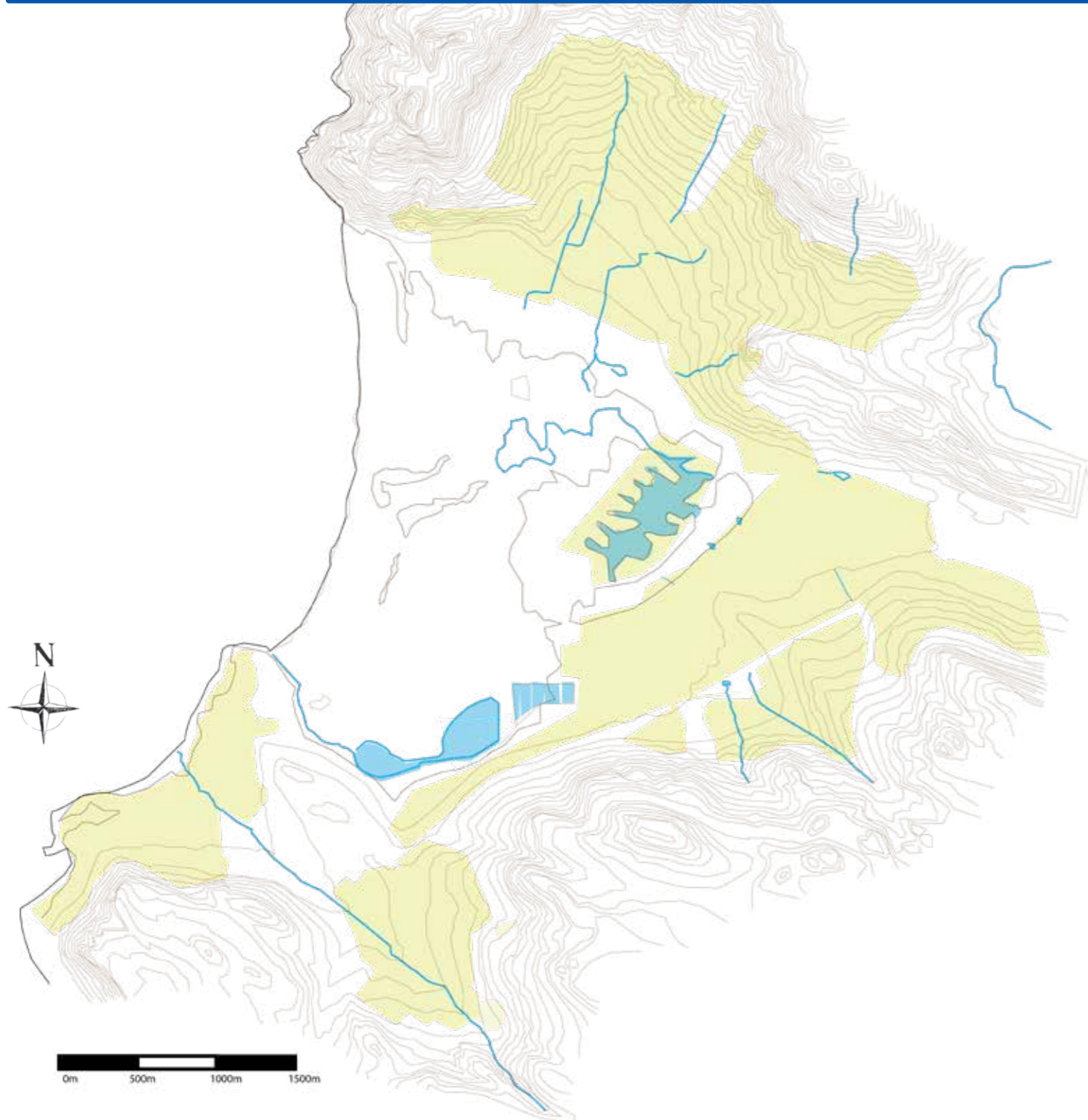
there are THREE main limiting factors for development in the South Peninsula:

1. TOPOGRAPHY, LOCAL ECOLOGY
2. INFRASTRUCTURAL PROVISIONING
3. ACCESS to EMPLOYMENT PROSPECTS

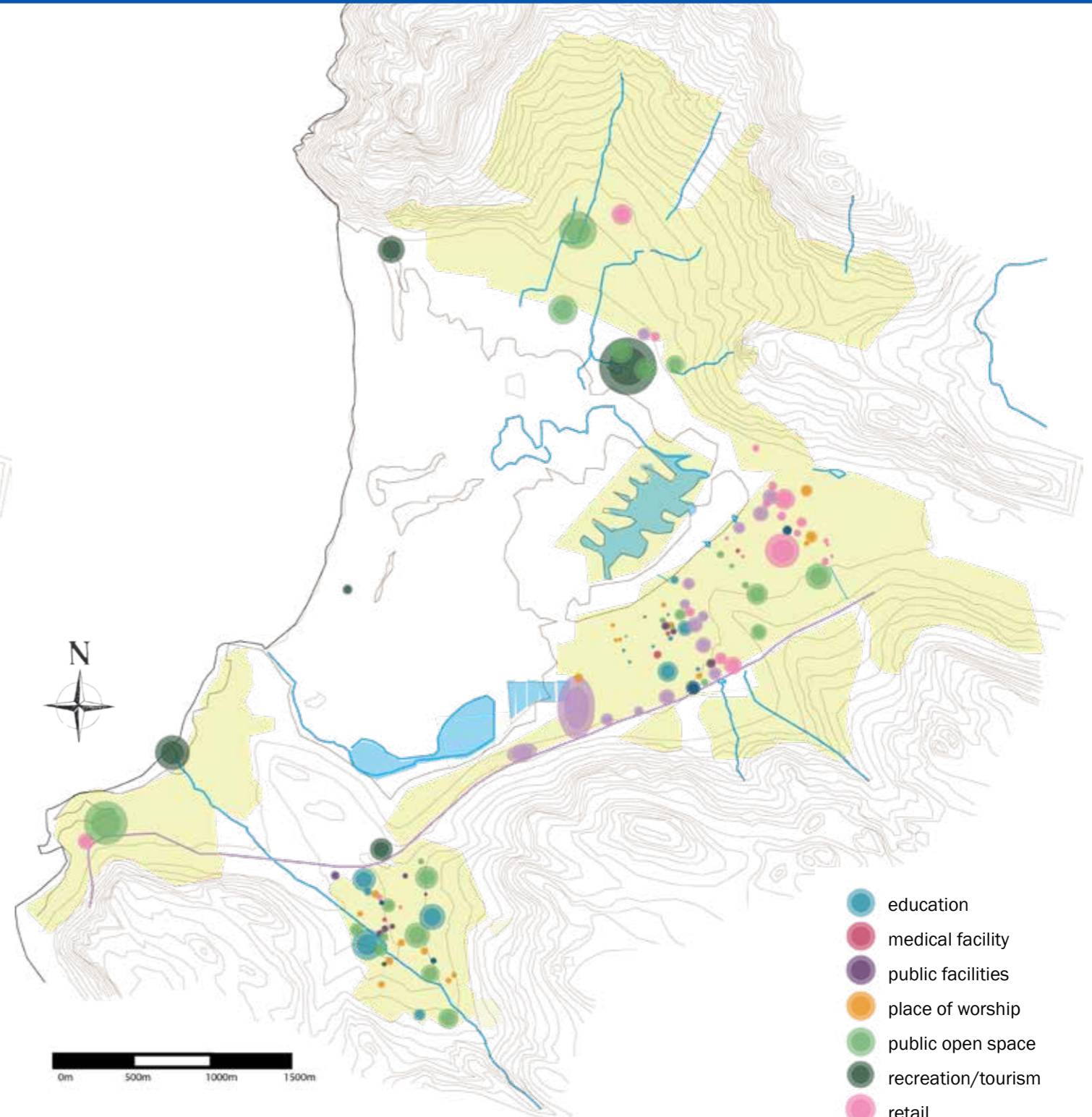
things to heed on the REvisit... DEVELOP, WALK, EXPERIENCE



FINDINGS analytical layering



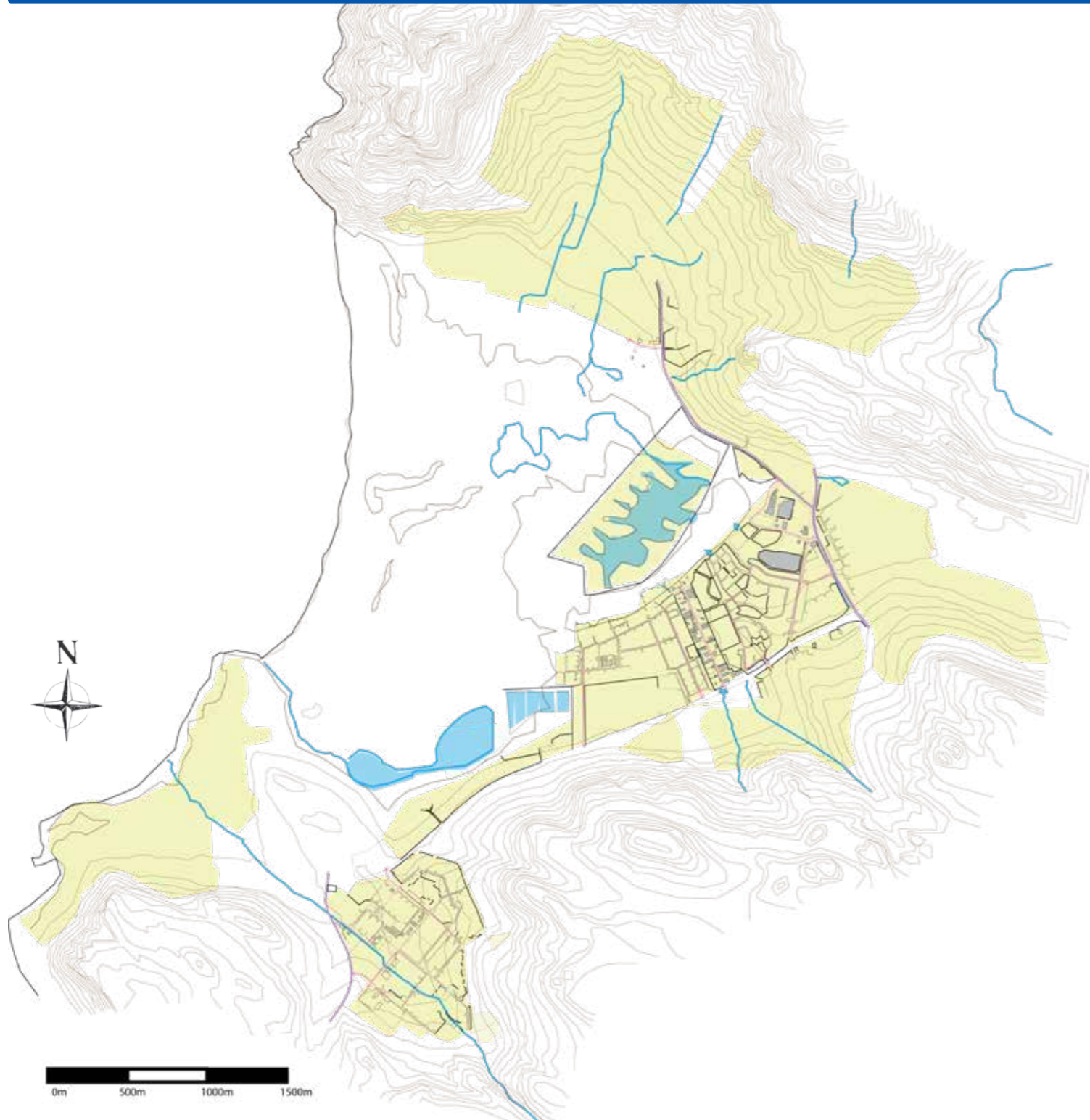
ANALYTICAL LAYERING: TOPOGRAPHY



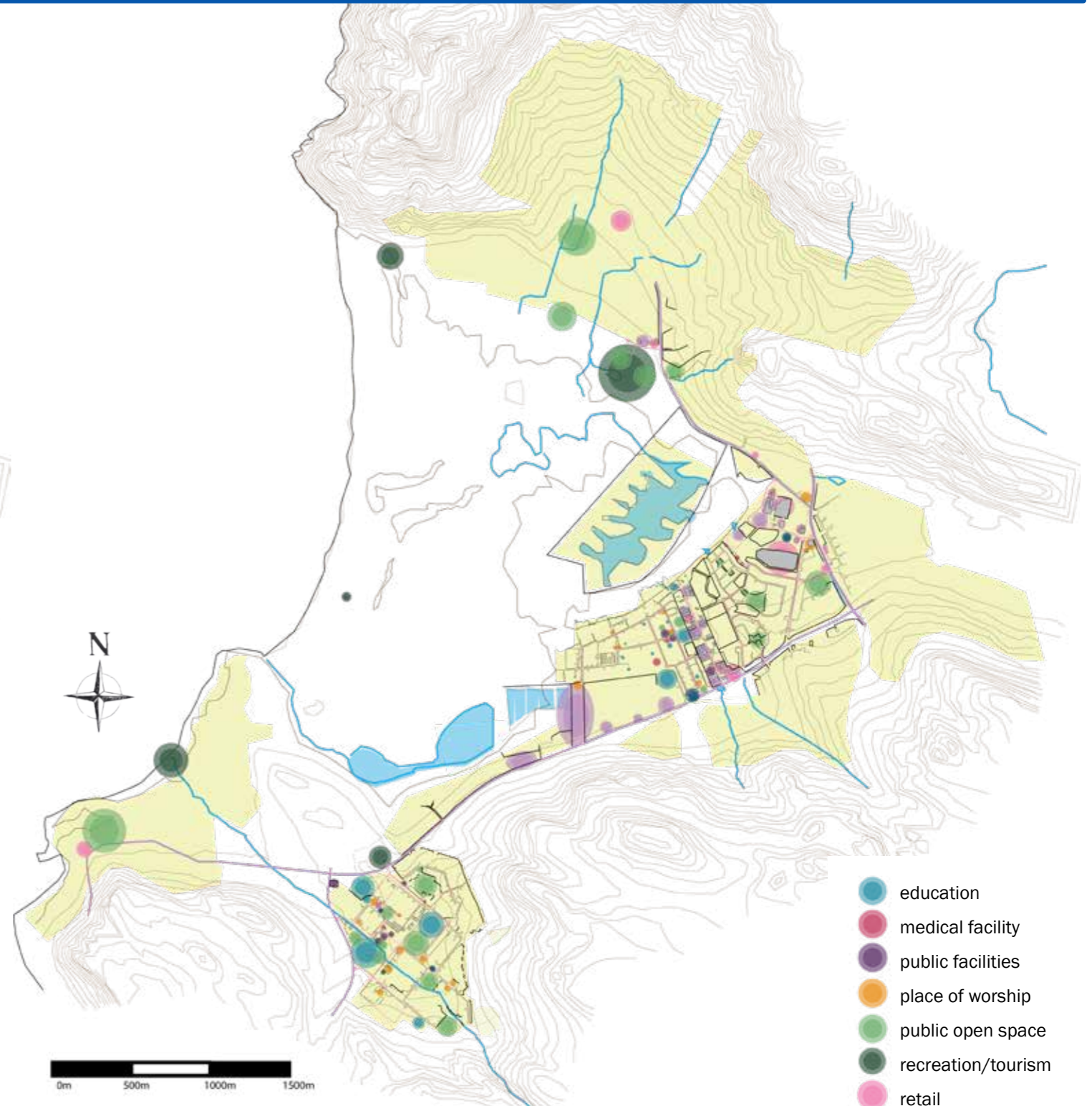
ANALYTICAL LAYERING: PUBLIC REALM HOTSPOTS

- education
- medical facility
- public facilities
- place of worship
- public open space
- recreation/tourism
- retail
- light industry

FINDINGS analytical layering



ANALYTICAL LAYERING: CONNECTIONS + EDGES



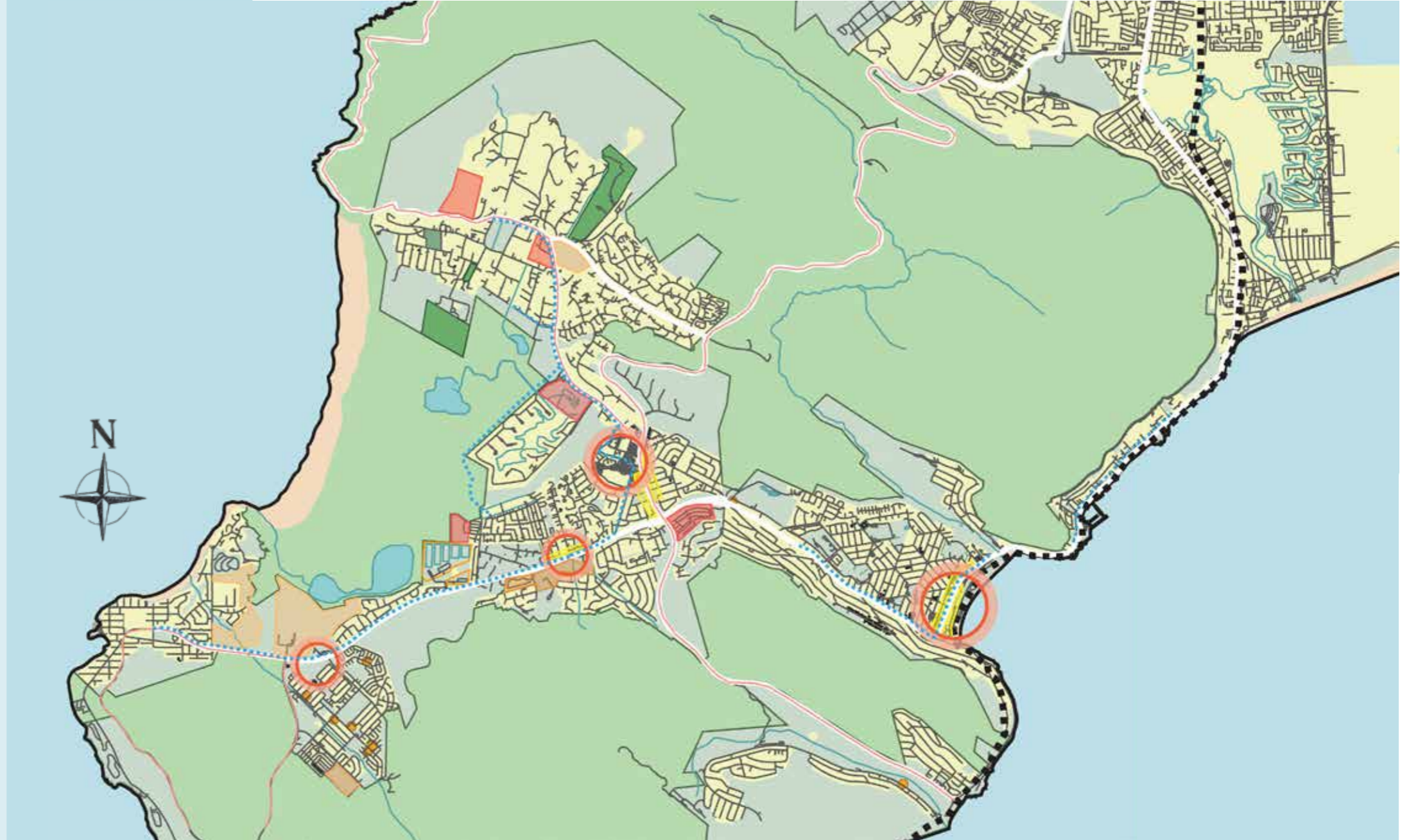
ANALYTICAL LAYERING: HOTSPOTS + CONNECTIONS + EDGES

FINDINGS analytical layering

- legend:
- SANPARKS Table Mountain National Park
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 - active street edge
 - mixed use local node
 - high NMT route
 - scenic drive

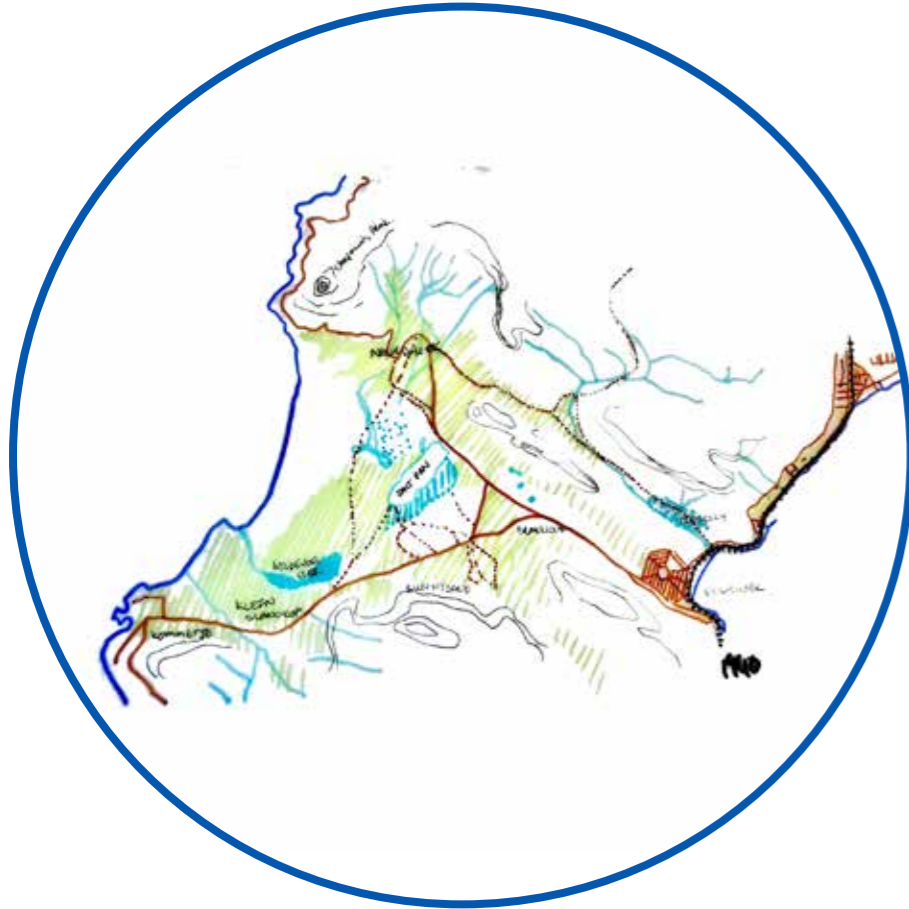
This map includes data from the City of Cape Town's 2022 spatial development framework plan. The city's overall strategy for the greater metro includes moves towards densification, improved mobility and transit networks, as well as the provision of housing.

The plan for the Southern District (which included the study area as well as Hout Bay, Muizenburg, and Tokai) has identified a series of local nodes as well as land parcels suitable for a range of development types. This map includes these demarcations for medium and low density development as well as including areas that have been approved for densification within the past year. Not included in the extent of this current map is the formal housing project in Dido Valley with a capacity of 600 homes. This map also includes some indications of public and pedestrian transit.



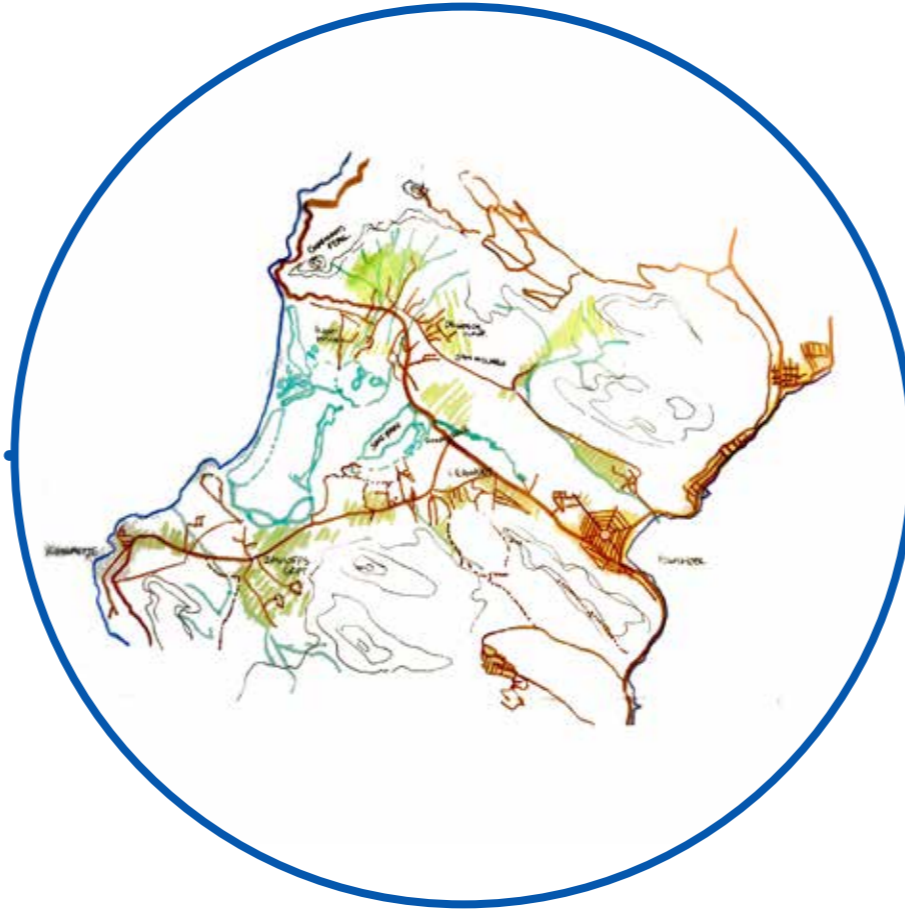
City of Cape Town Spatial Development Technical Framework for Southern District + popular informal NMT routes





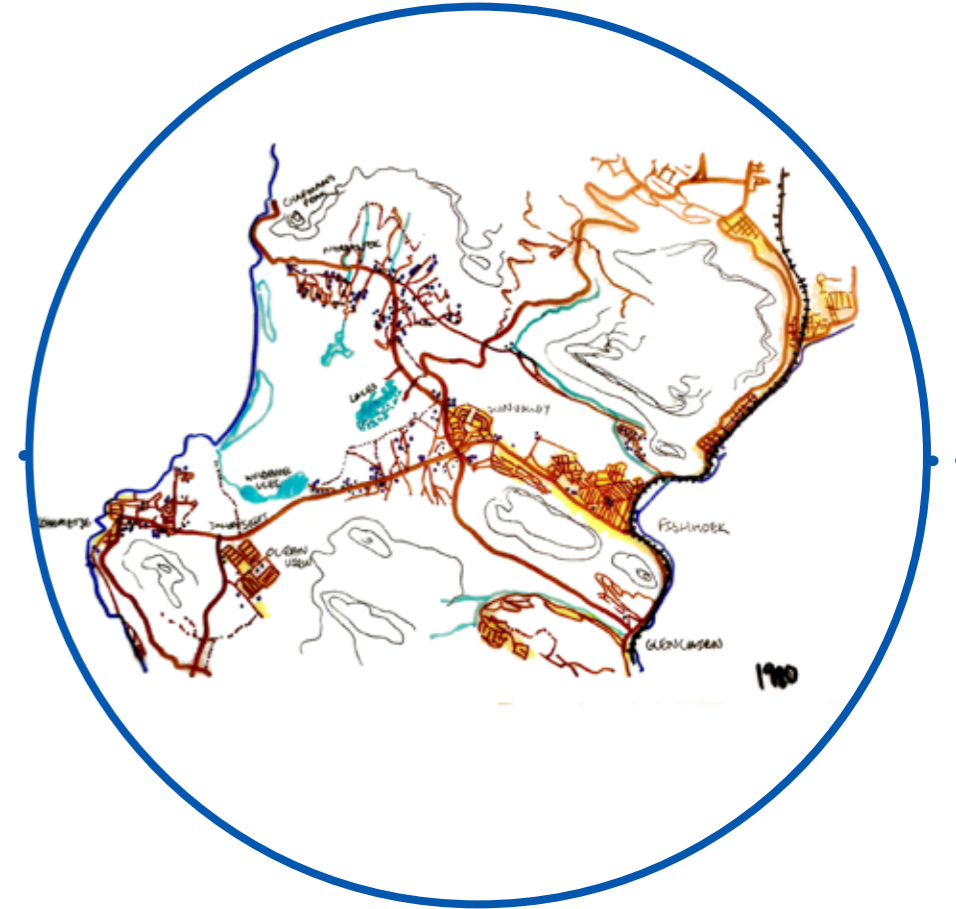
1940

- dominant rural character
- agricultural activities across Noordhoek Basin
- Fish Hoek hexagonal urban street grid laid
- access via Chapman's Peak Drive + Main Road via Fish Hoek



1960

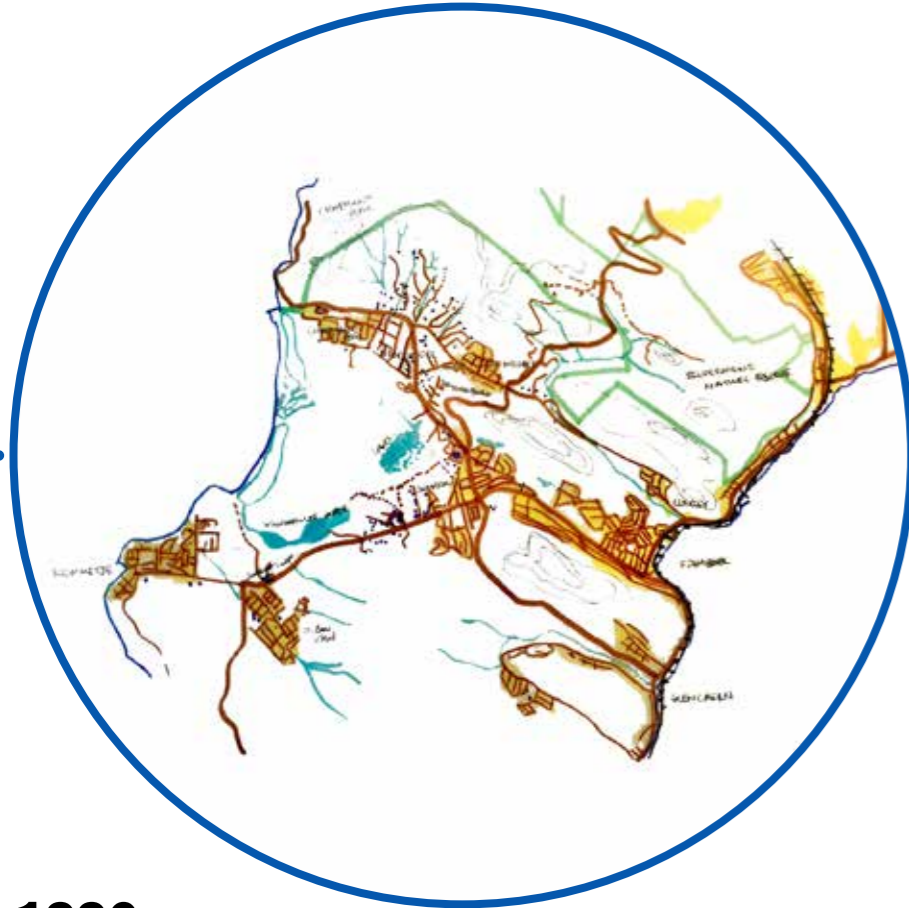
- dominant rural character
- agricultural activities across Noordhoek Basin
- some urban development at intersection of Noordhoek Main Road + Kommetjie Road
- expanding rural road network in Noordhoek, Kommetjie and Sunnydale
- Fish Hoek hexagonal urban street grid expanded
- access via Chapman's Peak Drive + Main Road via Fish Hoek



1980

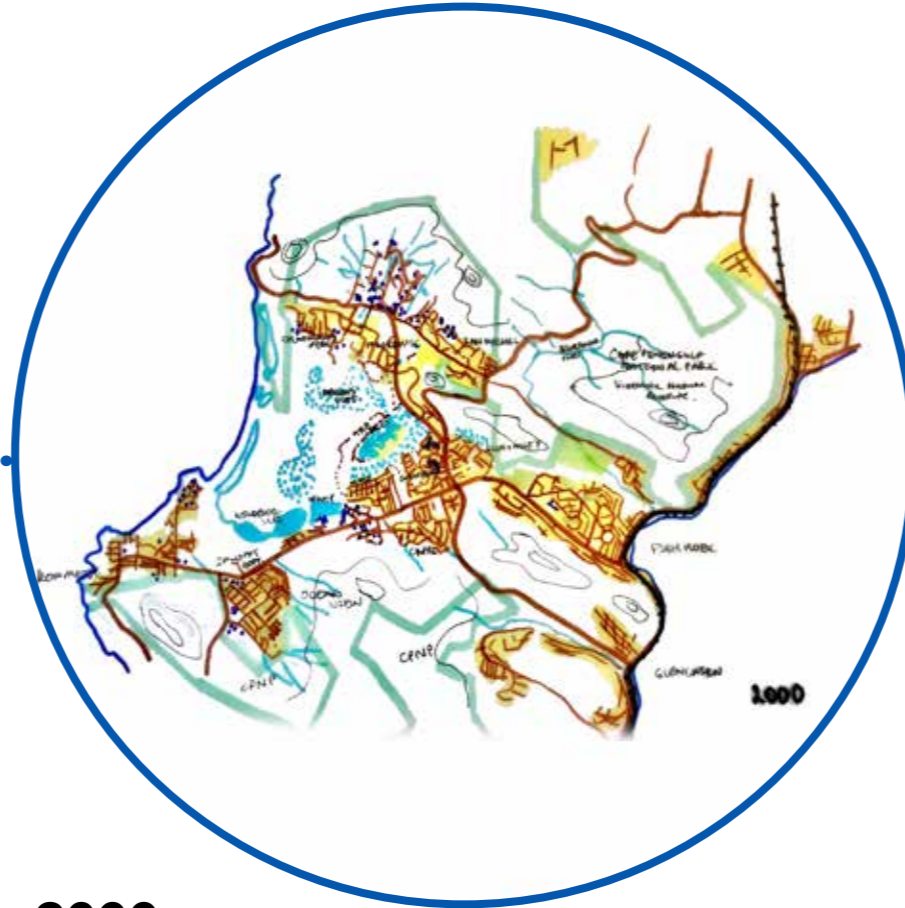
- dominant rural character in Noordhoek
- diminishing agricultural activities across Noordhoek Basin
- increased urban development at intersection of Noordhoek Main Road + Kommetjie Road
- expanding suburban connection between Sunnydale + Fish Hoek
- establishment of Ocean View after Group Area's Act resettlement of coloured communities in Simon's Town
- Fish Hoek, Kalk Bay residential expansion
- access via Chapman's Peak Drive + Main Road via Fish Hoek + new Ou Kaapse Weg mountain pass

FINDINGS the valley in time



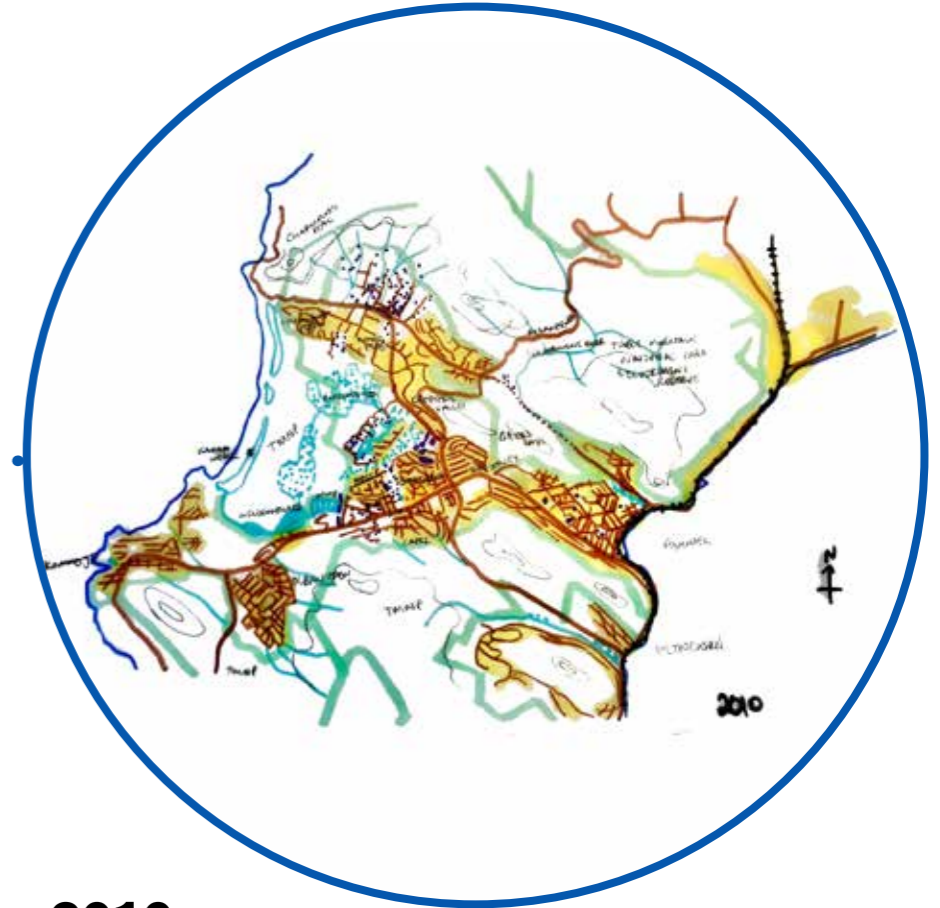
1990

- shifting character to mixed rural/suburban character
- agricultural activities limited to select farms at Northern and Southern edges of valley settlements
- Intensification settlement of Fish Hoek, Kommetjie, Ocean View + Sunnydale
- emergence of Capri and San Michele suburbs
- intensified subdivisions of agricultural erven in Noordhoek
- establishment of Watervoelelei Waste Water Treatment Plant
- consolidation of Silvermine Nature Reserve on Northern mountains



2000

- intensification of fragmented suburban character
- minimal agricultural activities limited to select farms at Northern and Southern edges of valley settlements, focus shifting from production to agro-tourism
- Intensification settlement of Fish Hoek, Kommetjie, Ocean View + Sunnydale
- emergence of Masipumelele township
- intensified subdivisions of agricultural erven in Noordhoek, emergence of private gated communities
- initial development of Lake Michelle artificial lakes + private gated community
- Longbeach Mall constructed at Sunnydale
- consolidation of Northern + Southern mountains into Cape Peninsula National Park



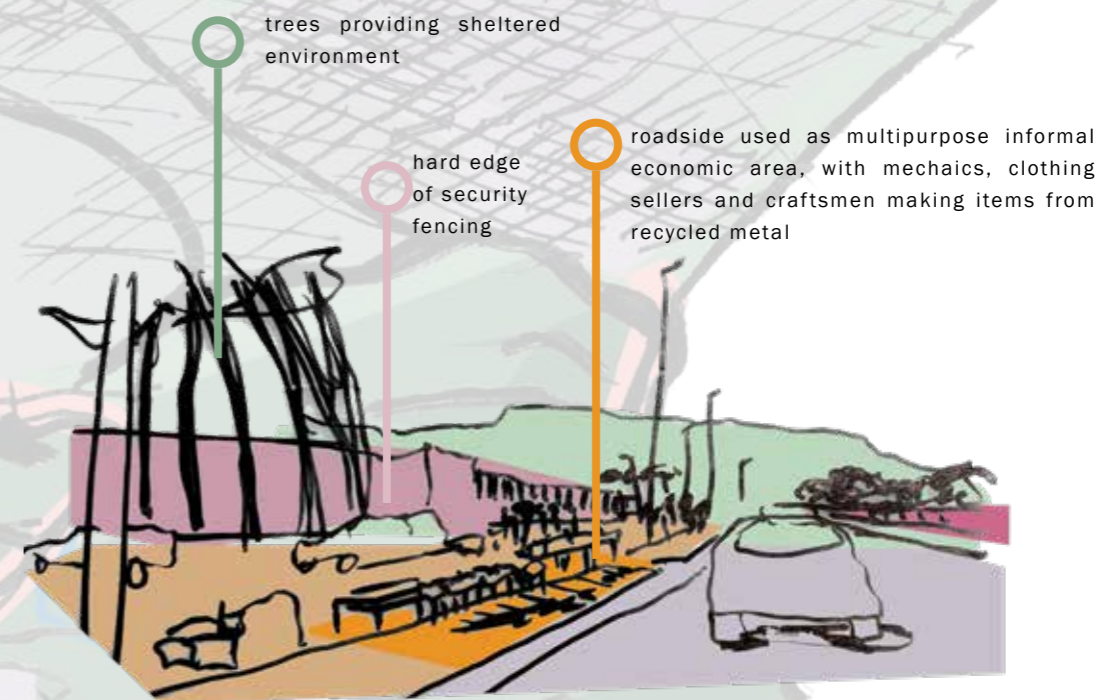
2010

- intensification of fragmented suburban character
- expansion of agro-tourism
- Intensification settlement of all suburban areas
- intensification of Masipumelele township + informal settlement
- intensified development of Lake Michelle artificial lakes + private gated community
- consolidation of wetlands, Northern + Southern mountains into Table Mountain National Park
- park boundaries form hard urban edge for any further urban development

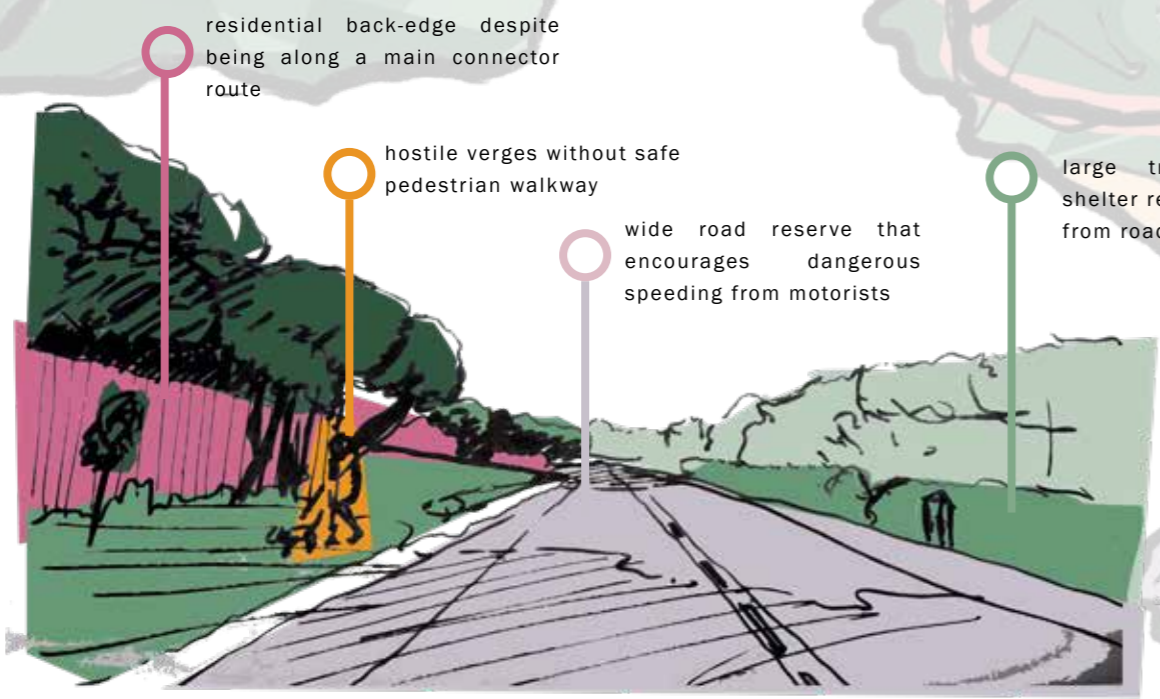
FINDINGS valley perspectives and character



Intersection houmoed + main road



kommetjie road, masipumelele



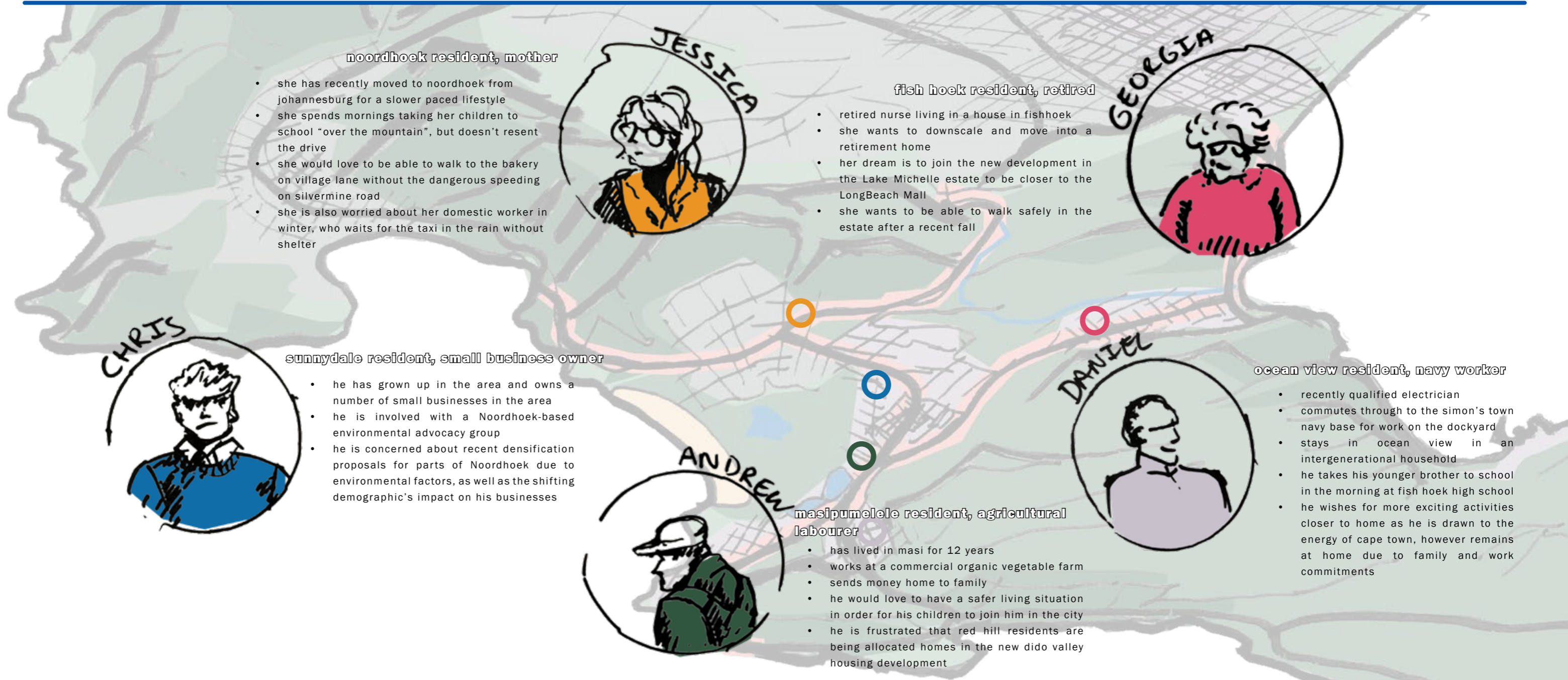
silvermine road



main road, fish hoek

a series of analytical diagrams examining existing conditions along the main connector routes in the valley

FINDINGS valley perspectives and character



during the LEARN + PLAY phase of the research the following 5 characters have been developed in order to synthesise some of the data and personal perspectives of interviewees. They reflect the diverse communities and concerns present in the area

DESIGN DEVELOPMENT where + what

Masipumelele Soccer and Rugby Club sports complex offers opportunities to better interface between the immediate residential surrounds, the wetland walking trails, and the commuter route along main road

Lake Michelle gated community offers an opportunity to better interface with main road while preserving ecological diversity through a green public open space NMT connection on its undeveloped northern edge. This will address the current spatial separation from the valley.

Shopping mall node offers opportunities to better interface with the wetlands and surrounding residential areas.

Failed back edge of Lake Michelle. Potential for engagement outside the estate.

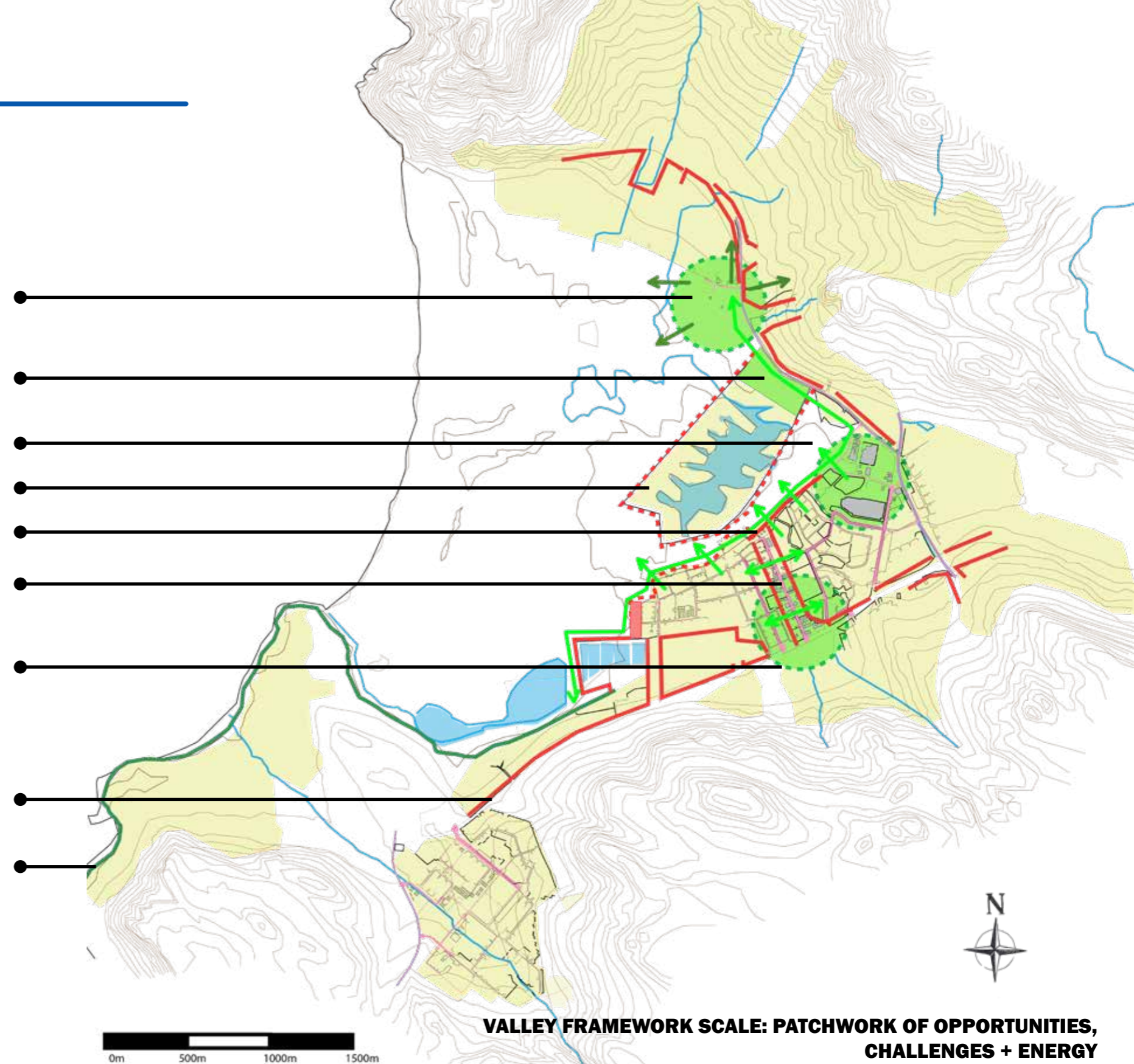
Dead back edges of residential suburbs. These areas entirely disengaged from their natural environment. Prior road infrastructure projects have failed to receive environmental approval.

Possible connections through the Lekkerwater Road light industrial area into Masipumelele and Sunnysdale. Currently the industrial area is a divisive spatial element between these communities, limiting access to single intersections with Kommetjie Road.

Masipumelele gateway node presents opportunities for facilitation of informal economic activities, improvements on the existing NMT circulation, and producing better placemaking for community identity and character.

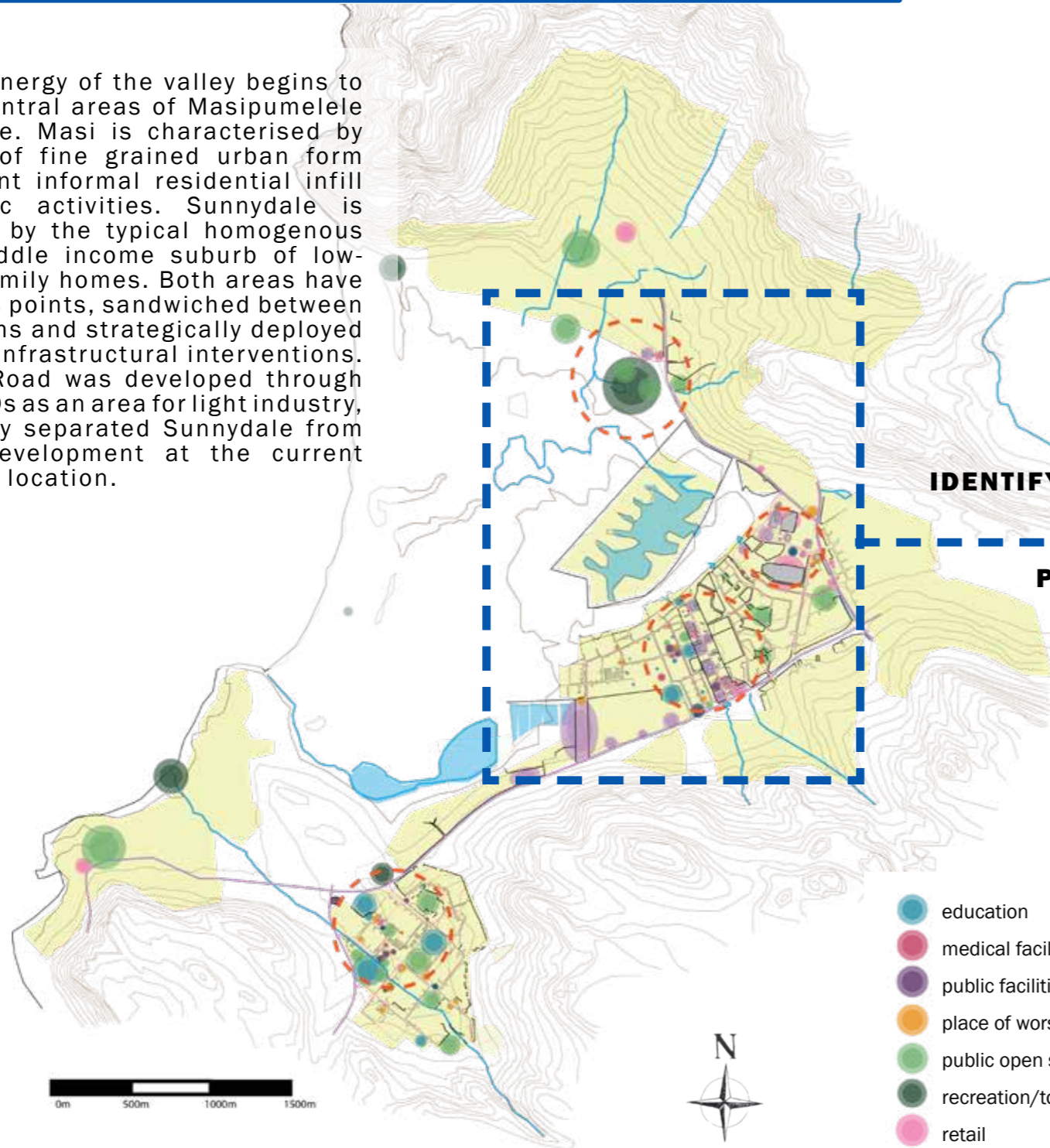
Edges along Kommetjie Road, the primary transit corridor in the valley, are disengaged from the public realm. Residential areas have turned their backs while commercial premises retreat behind walls and fences.

Successful walkway along the wetland-urban edge from Wildevoelvllei to the Kommetjie lighthouse. This route is over 6km and sections with direct frontage from homes are frequented more than those isolated from the



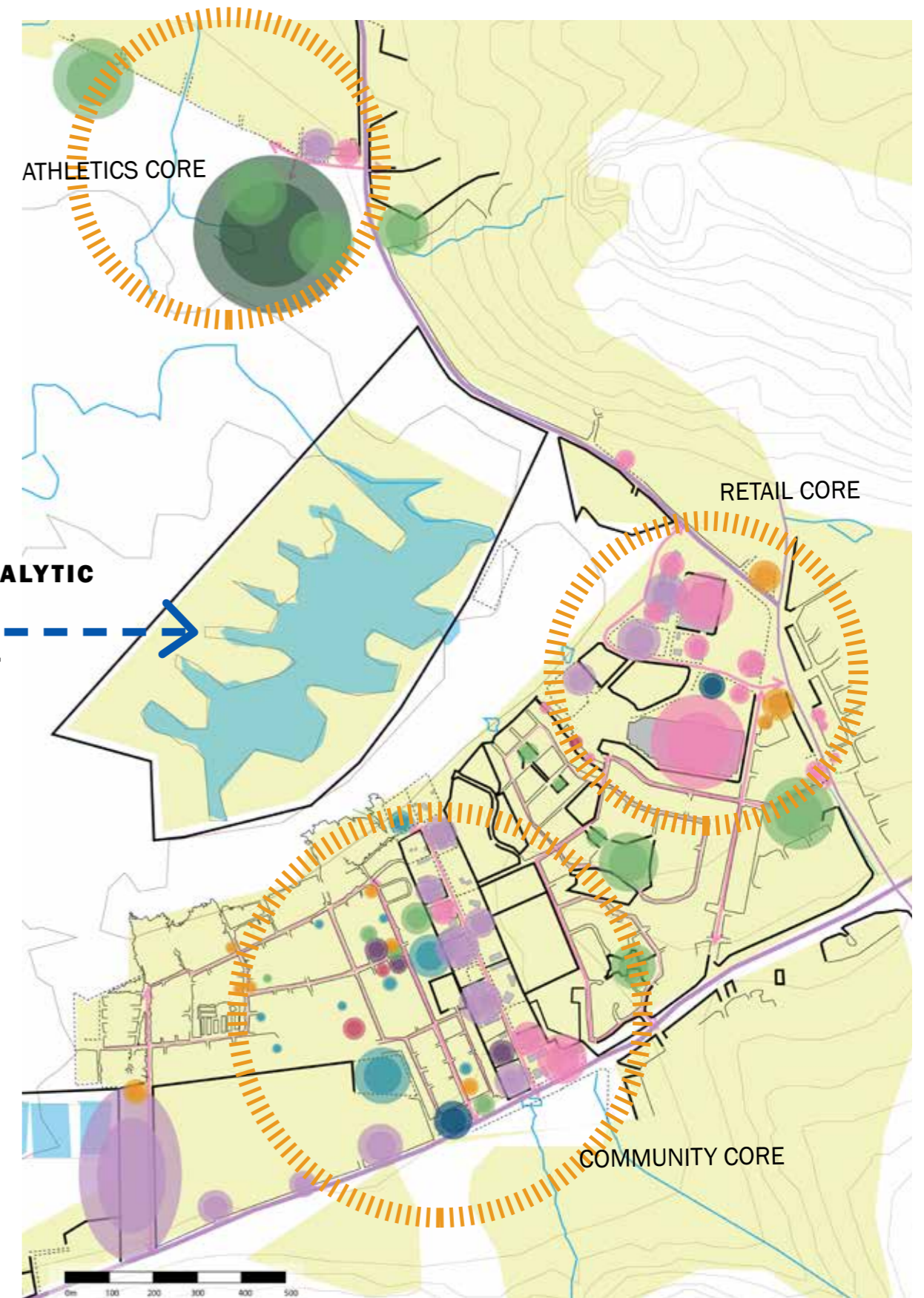
DESIGN DEVELOPMENT where + what

Much of the energy of the valley begins to land in the central areas of Masipumelele and Sunnydale. Masi is characterised by a patchwork of fine grained urban form with significant informal residential infill and economic activities. Sunnydale is characterised by the typical homogenous form of a middle income suburb of low-lying single family homes. Both areas have limited access points, sandwiched between natural systems and strategically deployed planning and infrastructural interventions. Lekkerwater Road was developed through 1960s to 1980s as an area for light industry, and effectively separated Sunnydale from any future development at the current Masipumelele location.



THE VALLEY: NODE FRAMEWORK

- education
- medical facility
- public facilities
- place of worship
- public open space
- recreation/tourism
- retail
- light industry

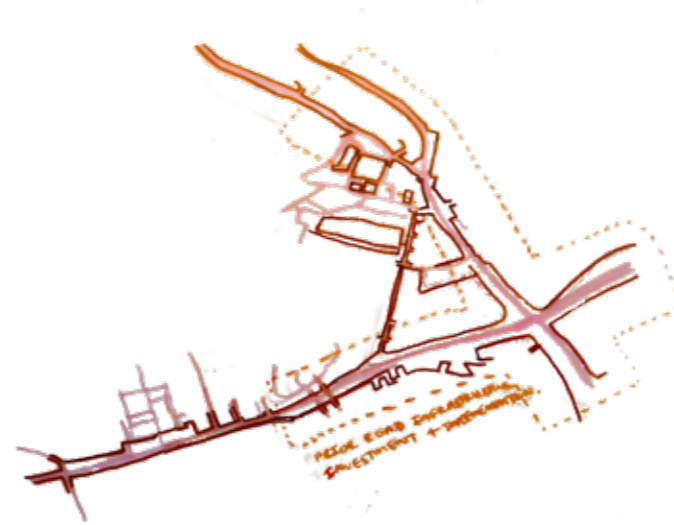


DESIGN DEVELOPMENT where + what



NODE PRECINCT: LAND USE

- mall
- water system
- retail
- public open space
- residential
- light industrial



NODE PRECINCT: EDGES VS ROADWAYS

- road surface
- street edge



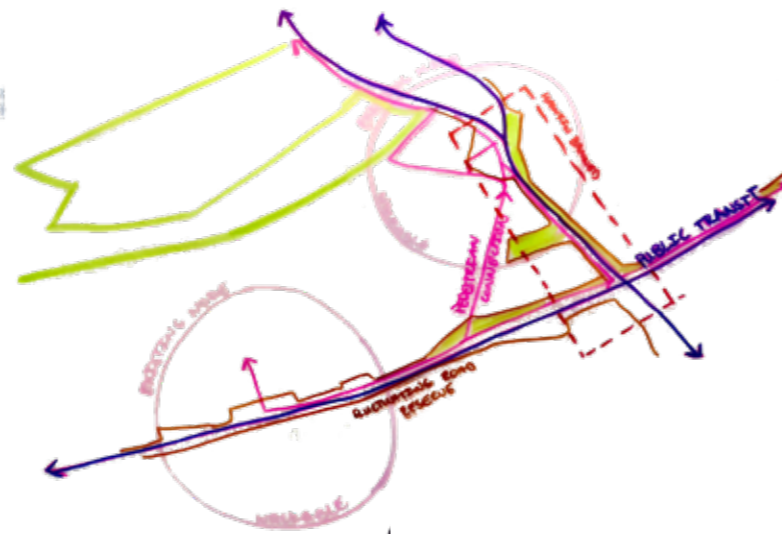
NODE PRECINCT: PUBLIC TRANSIT

- pedestrian route
- taxi route
- informal pedestrian paths
- bus route



NODE PRECINCT: FORMAL + INFORMAL ECONOMIES

- formal retail
- informal retail
- informal housing infill
- gated community edge
- formal residential



NODE PRECINCT: EXISTING LAYERING



NODE PRECINCT: URBAN GRAIN + ANALYTICAL LAYERING

DESIGN DEVELOPMENT where + what

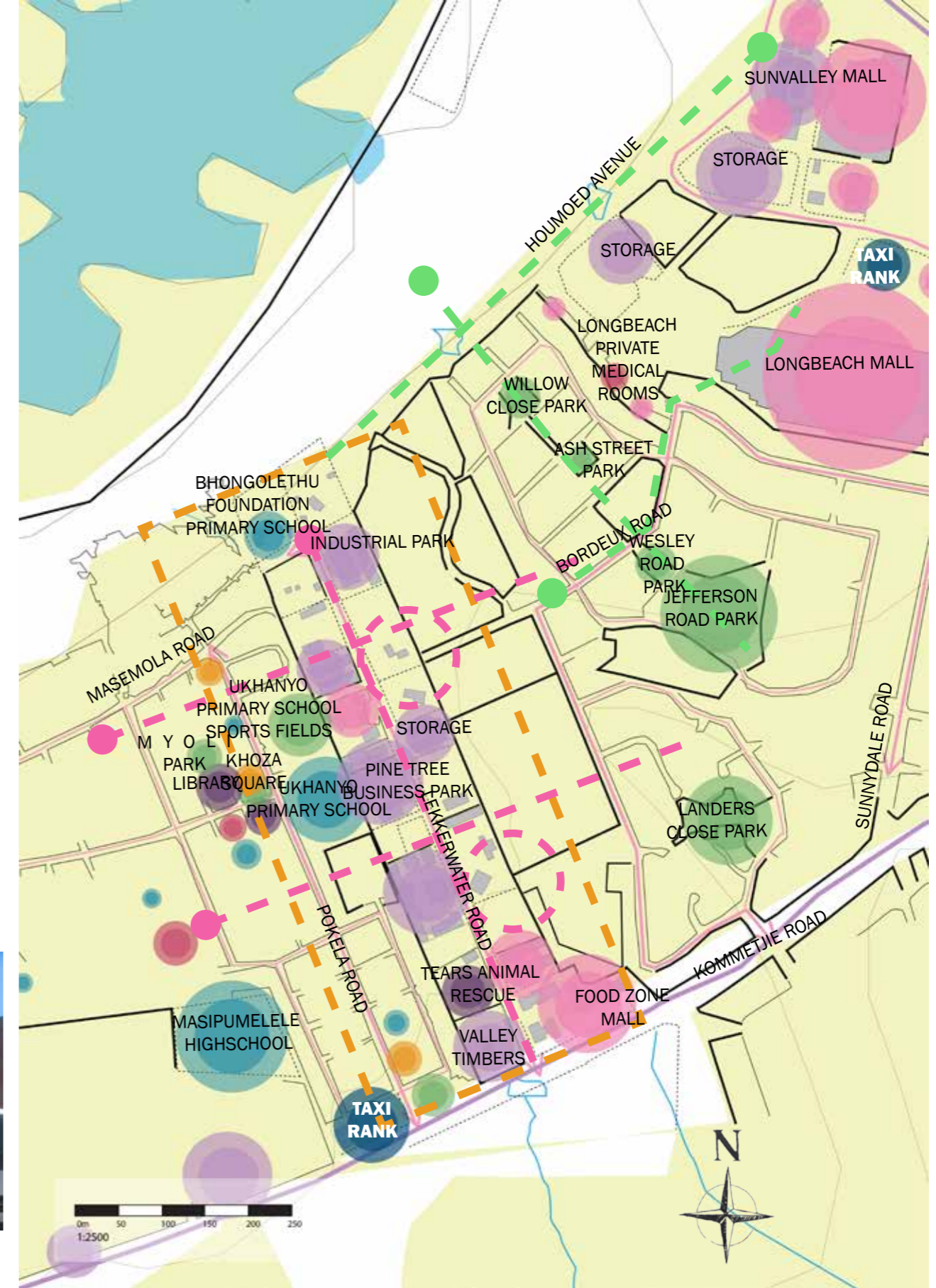
LANDING in LEKKERWATER ROAD

LEKKERWATER ROAD LIGHT INDUSTRIAL AREA sits as a blockage to the flow of people, economies and urban life in the Noordhoek Valley. It sits as an impermeable divide between Masipumelele and Sunnydale. This forces all movement out of residential areas southwards to Kommetjie Road in order to circulate throughout the greater Noordhoek Valley. This site is identified as a catalytic site due to the existing character of the site, as well as its location and orientation perpendicular to Kommetjie Road, the primary connector route in the area.

The following design intervention seeks to address the social, economic and ecological blockages in this community through a strategy of SHIFTING and PERFORATING.

PERFORATING will see new apertures opening in the fabric of the Valley to improve circulation and access.

SHIFTING will see interventions deployed strategically at and beyond these new perforations to reactivate the urban fabric to allow a resilient and integrated community to thrive in their diverse urban environment.

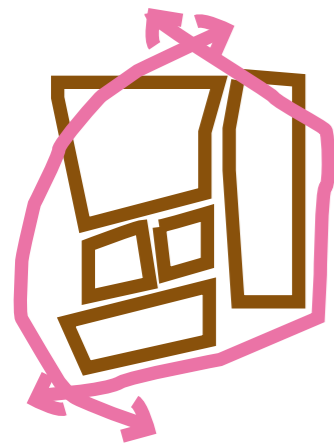


OPERATIVE WORD for URBAN DESIGN STRATEGY

DAILY MIGRATIONS IN A SHIFTING LANDSCAPE

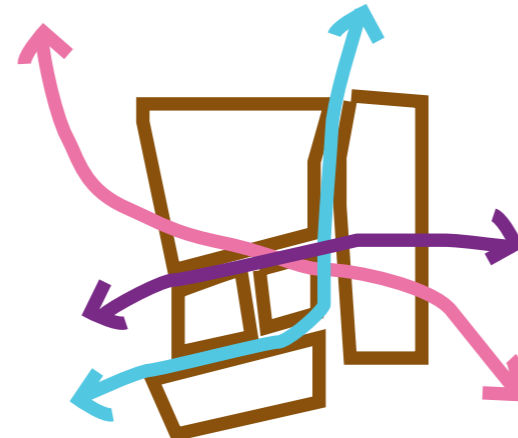
facilitating a circular economy on the south peninsula

how can each area **SHIFT** to **CIRCULATE** better with the **VALLEY** and **WITHIN ITSELF**?



PERIPHERAL CENTER

to **CIRCULATORY URBAN COMMUNITY**



revisiting policy....

PLACEMAKING for quality open space

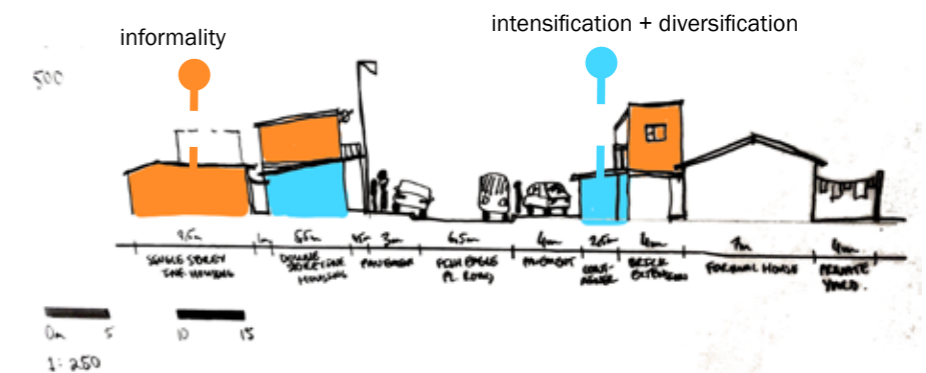
promote **INTENSITY, DIVERSITY + ADAPTABILITY** of use

positive **INTERFACES** onto the public realm

provide **SUPPORT** to sites of **INFORMALITY**

value + enhance **GREEN + OPEN SPACE**

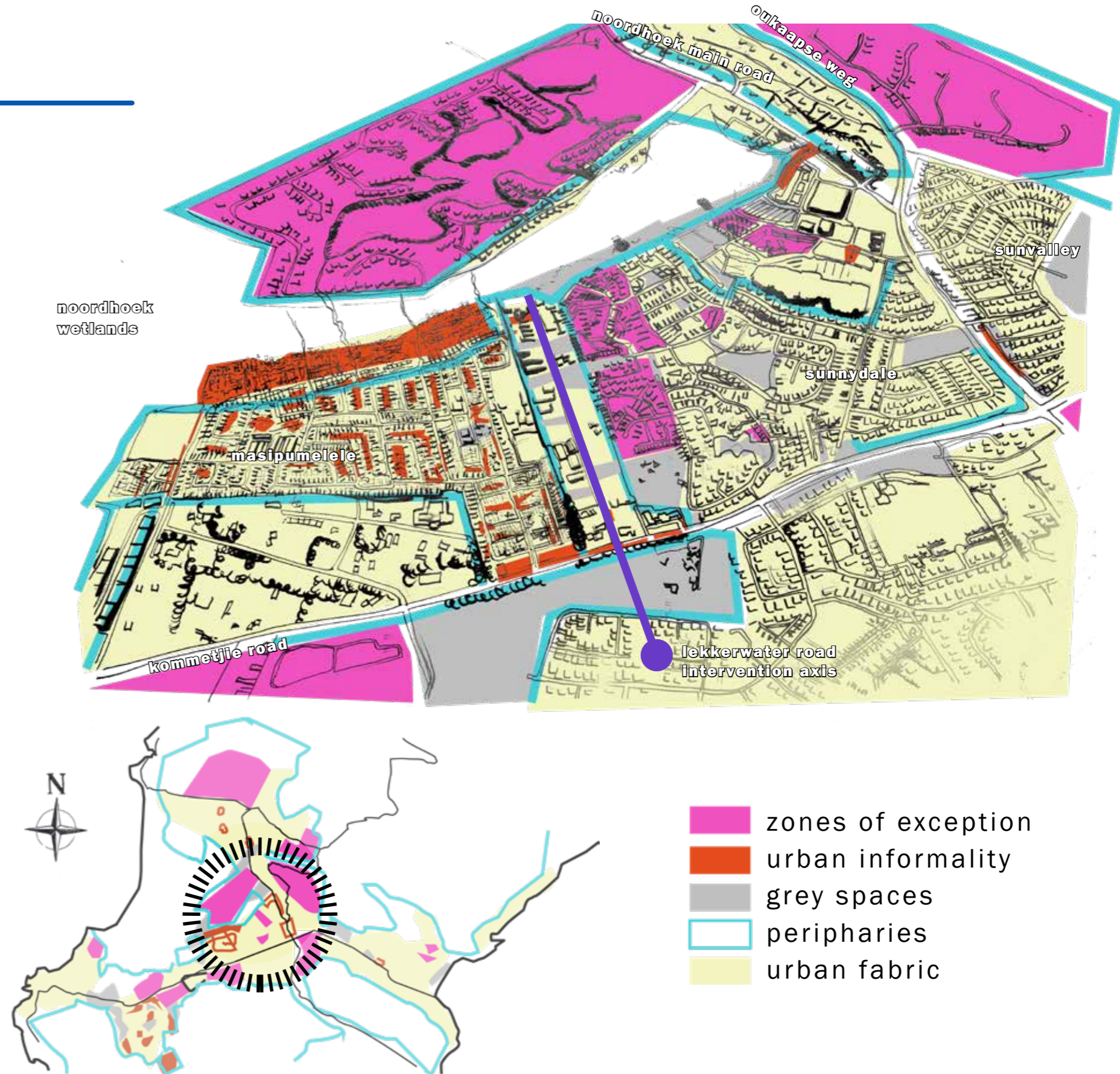
principles from City of Cape Town's Urban Design policy

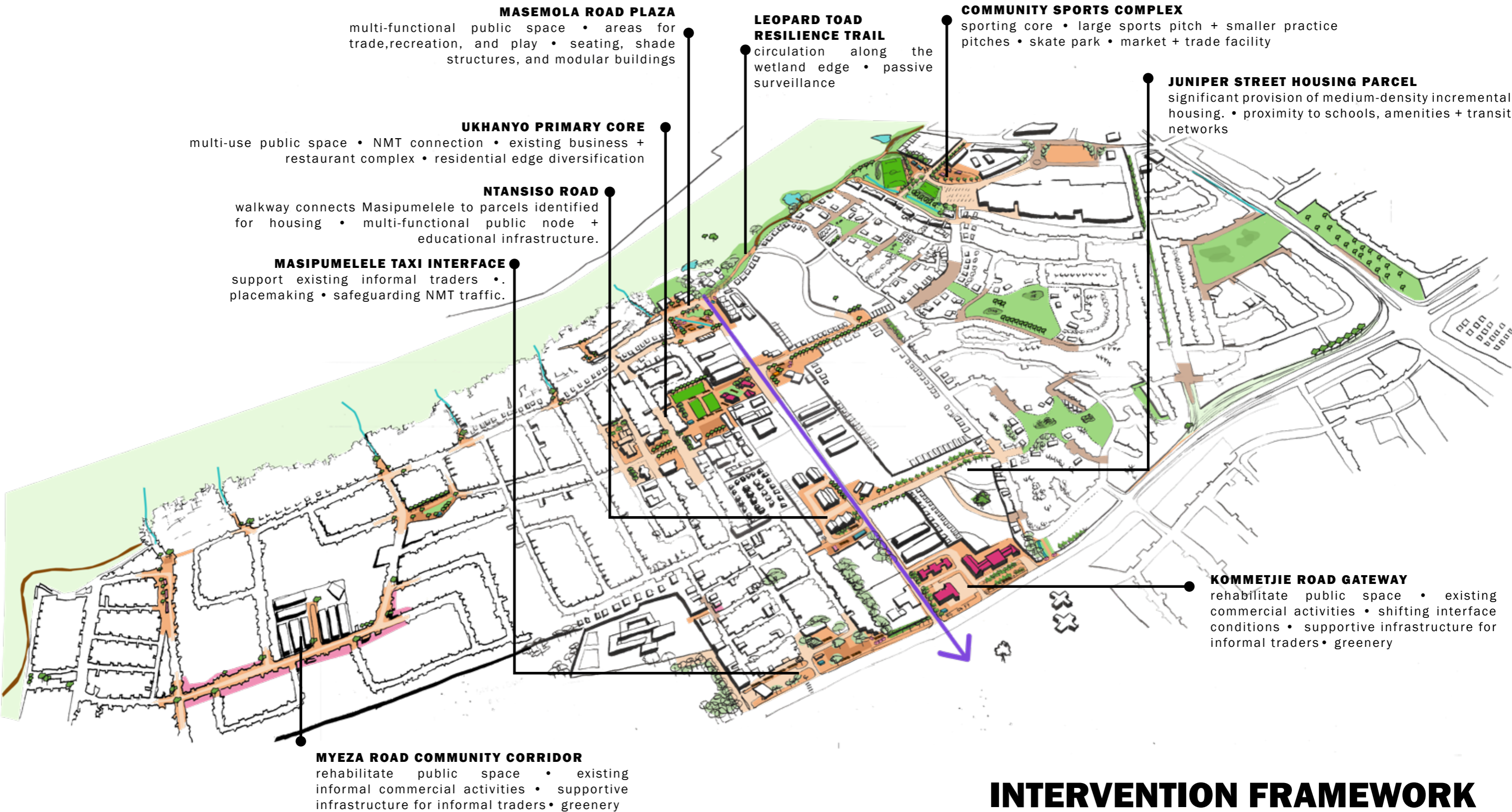


DESIGN DEVELOPMENT theoretical precinct

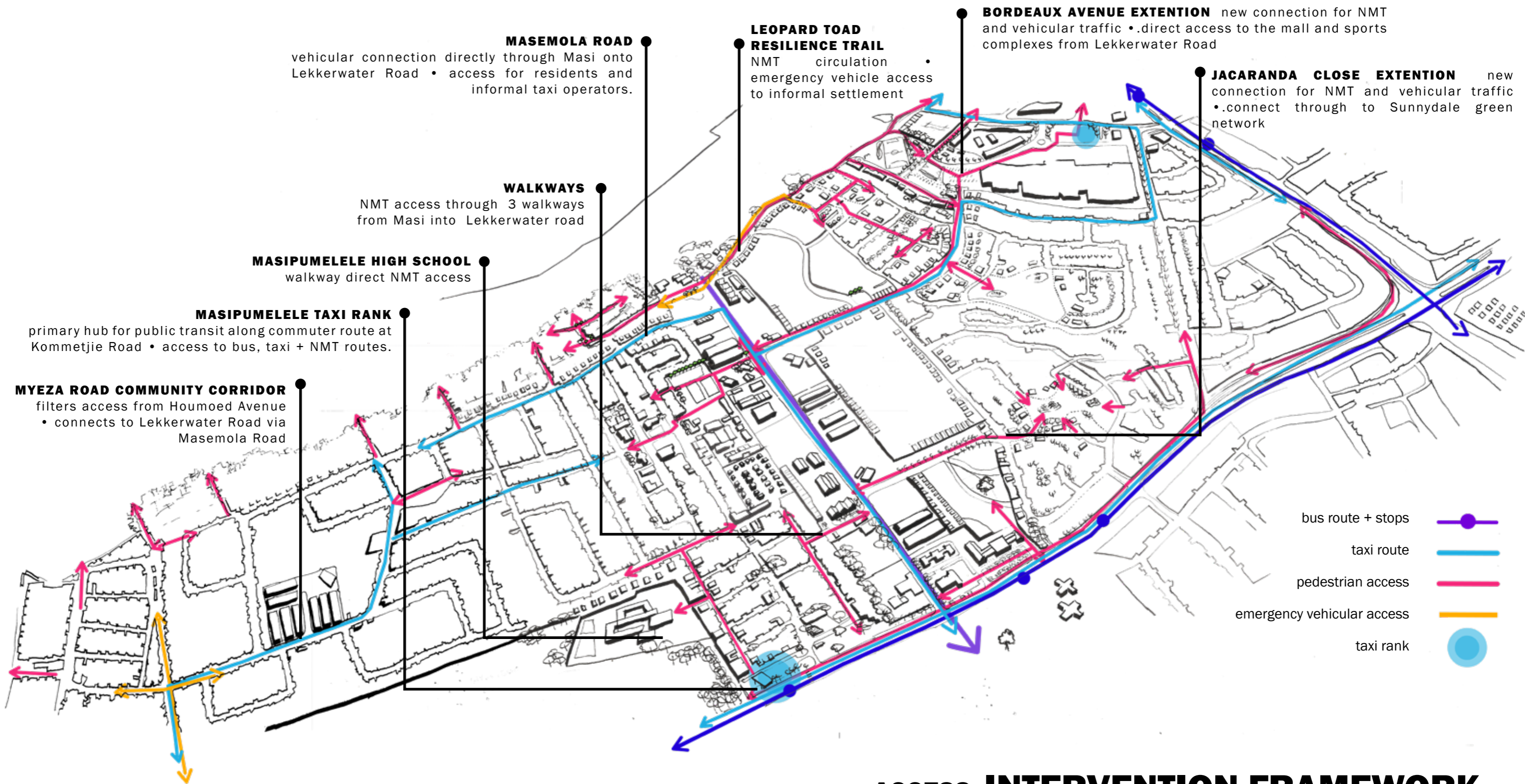
The greater Lekkerwater Precinct demonstrates many of the conditions of southern cities that Roy has identified. Building on the valley's theoretical framework, here the precinct receives the same treatment in order to better grapple with the patchwork of spatial conditions that exist across the research area. Roy's zones of exception are particularly prominent as spatial structuring elements, serving to effectively divide parts of the residential neighbourhoods. Sunnnydale in particular is interesting as it represents the aspiration quality of these zones of exception, where some middle income communities have set up gated communities within the larger residential fabric. Masipumelele demonstrates an urban form and economy typical of urban informality. Homes at the northern edge of the township are auto-constructed informal dwellings at major risk of both flooding and fires. There is also significant informal residential infill within the areas of formal housing. The peripheries are maintained by a strict urban-ecological edge further upheld through management of these areas by the South African National Parks service. However, the peripheries are also a network of divisive elements within the urban fabric. Lekkerwater Road, Masipumelele and Sunnydale all have areas that are dislocated from circulation in the valley. Finally, the network of grey spaces show the vast opportunity for shifting the community's sense of ownership over public open space. Parts of Sunnydale host a series of currently neglected parks. Masipumelele shows a near complete lack of open space, demonstrating the significant pressure in this area for space. This is exemplified in the grey space identified on its western edge, where the community's sports facilities were commandeered by local government to provide emergency housing for survivors of a shack fire.

This patchwork of spatial conditions reveals the dynamic structuring elements present in the precinct. These elements produce a kinetic energy across the communities present here, and the intervention moves forward to alleviate some of these pressures while establishing a new spatial logic to guide future development.





INTERVENTION FRAMEWORK



MASEMOLA ROAD
 vehicular connection directly through Masi onto Lekkerwater Road • access for residents and informal taxi operators.

LEOPARD TOAD RESILIENCE TRAIL
 NMT circulation • emergency vehicle access to informal settlement

BORDEAUX AVENUE EXTENTION new connection for NMT and vehicular traffic • direct access to the mall and sports complexes from Lekkerwater Road






JACARANDA CLOSE EXTENTION new connection for NMT and vehicular traffic • connect through to Sunnydale green network

WALKWAYS
 NMT access through 3 walkways from Masi into Lekkerwater road

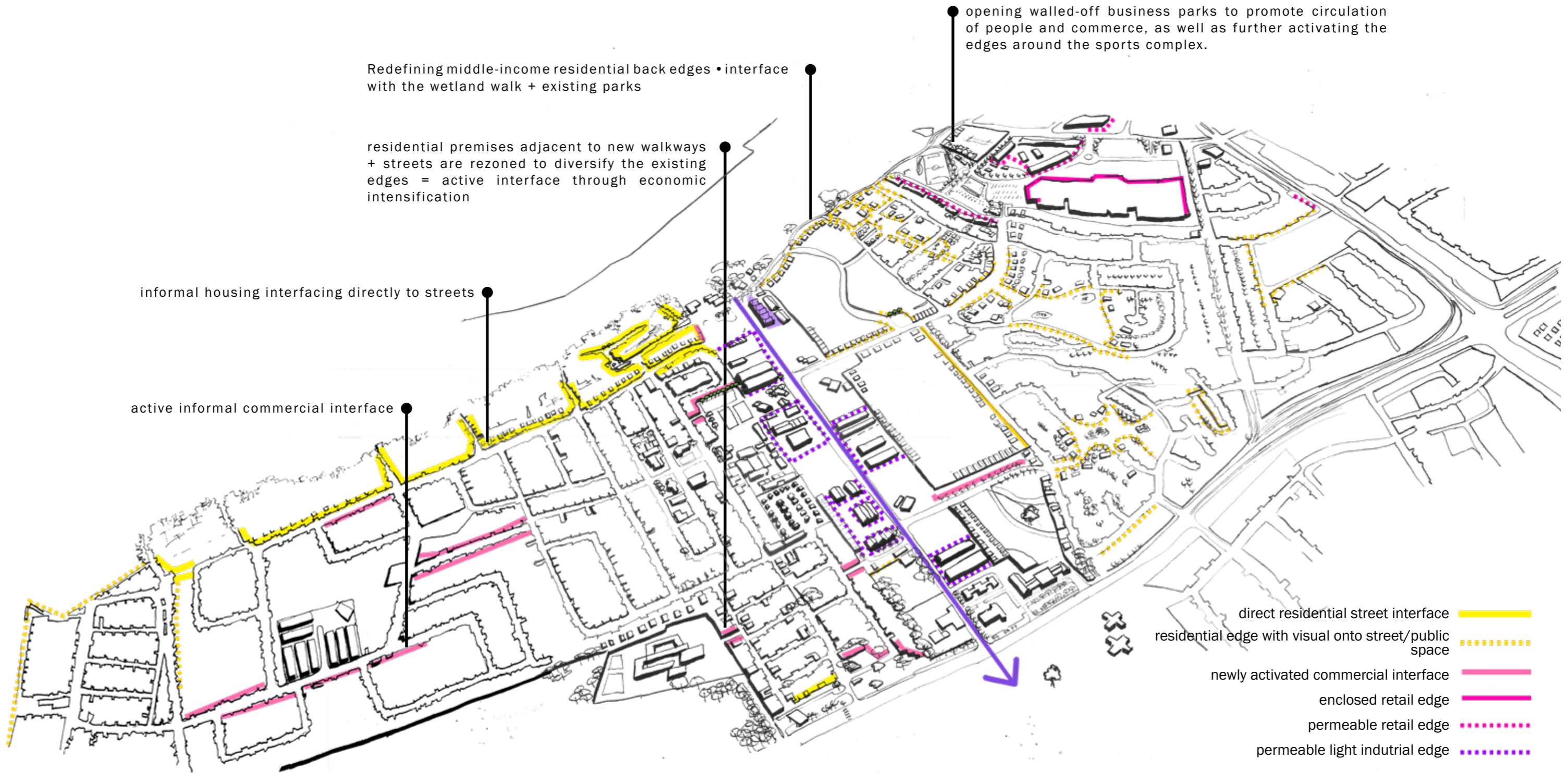
MASIPUMELELE HIGH SCHOOL
 walkway direct NMT access

MASIPUMELELE TAXI RANK
 primary hub for public transit along commuter route at Kommetjie Road • access to bus, taxi + NMT routes.

MYEZA ROAD COMMUNITY CORRIDOR
 filters access from Houmoed Avenue • connects to Lekkerwater Road via Masemola Road

- bus route + stops 
- taxi route 
- pedestrian access 
- emergency vehicular access 
- taxi rank 

ACCESS INTERVENTION FRAMEWORK



SHIFTED EDGE CONDITIONS INTERVENTION FRAMEWORK

The previous spatial and access interventions aim to **facilitate a new organisation of spatial use in Lekkerwater Road.**

New access points allow for different **land parcels** to be identified for **housing**, which can attract people away from the dire conditions experienced by many residents in Masipumelele's informal settlement fringe.

The housing sites are held by and **intensification of existing light industry**, and the introduction of **new commercial and retail oriented sites.**

These uses are all further served and connected by the existing and proposed **network of green space** threaded through the area.

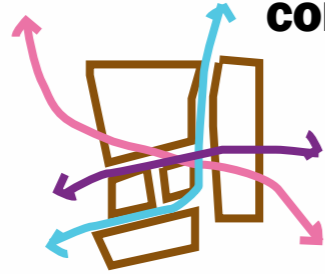


ACTIVATED PATCHWORK INTERVENTION FRAMEWORK



PERIPHERAL CENTER

to **CIRCULATORY URBAN COMMUNITY**



LEOPARD TOAD RESILIENCE WALK + SPORTS COMPLEX

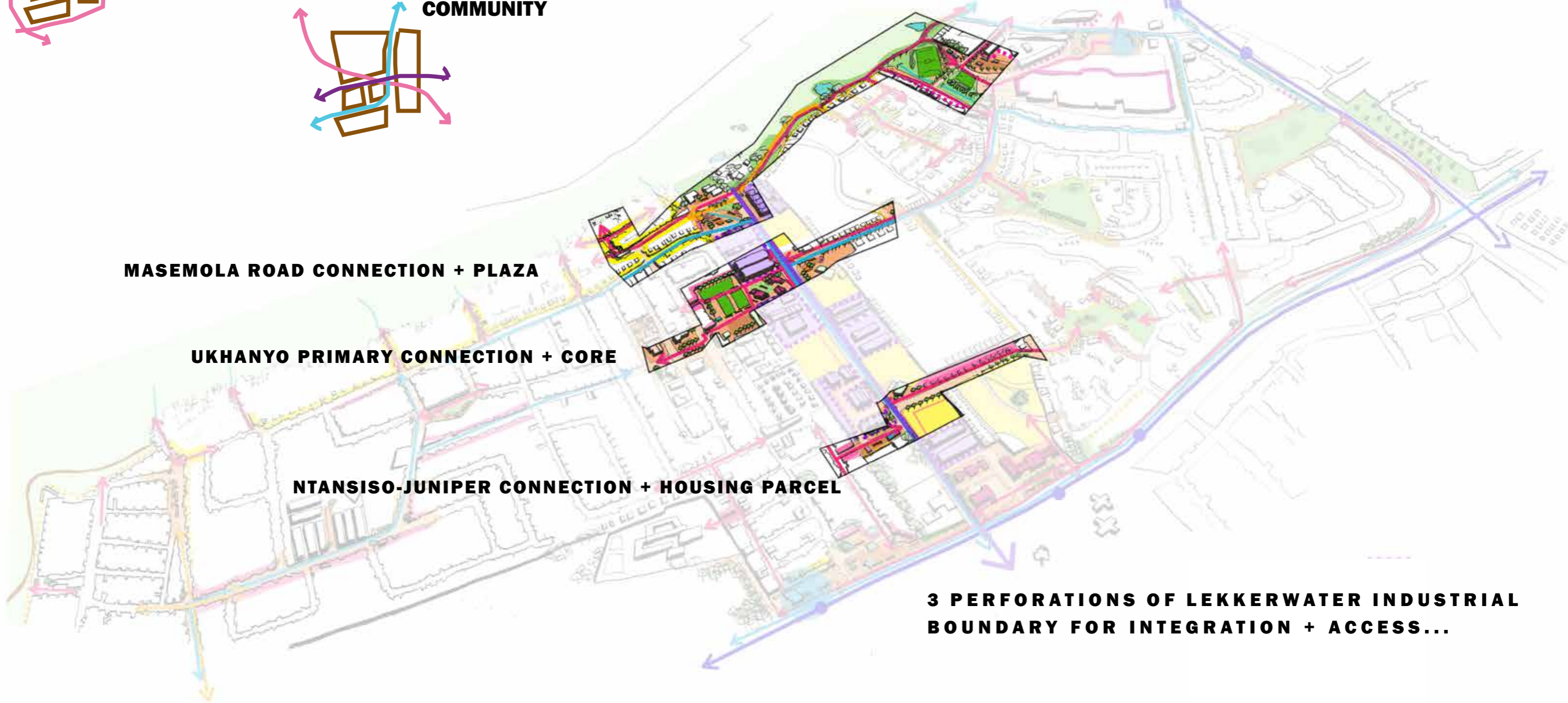
MASEMOLA ROAD CONNECTION + PLAZA

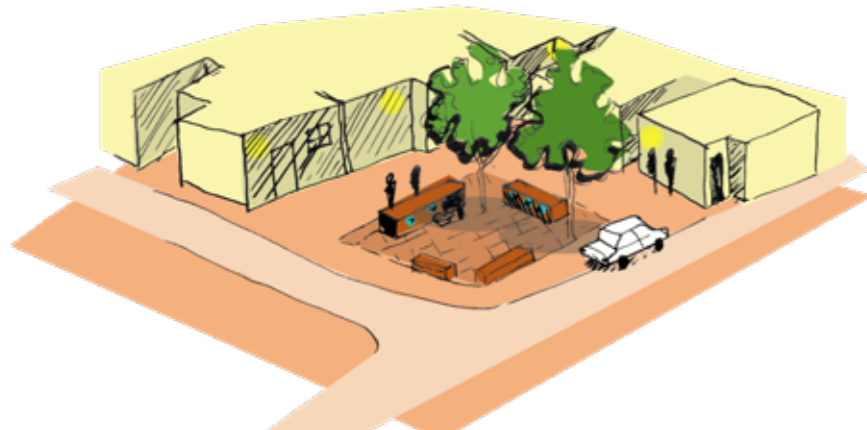
UKHANYO PRIMARY CONNECTION + CORE

NTANSISO-JUNIPER CONNECTION + HOUSING PARCEL

3 PERFORATIONS OF LEKKERWATER INDUSTRIAL BOUNDARY FOR INTEGRATION + ACCESS...

PERFORATION STRATEGY IMPLEMENTATION FRAMEWORK

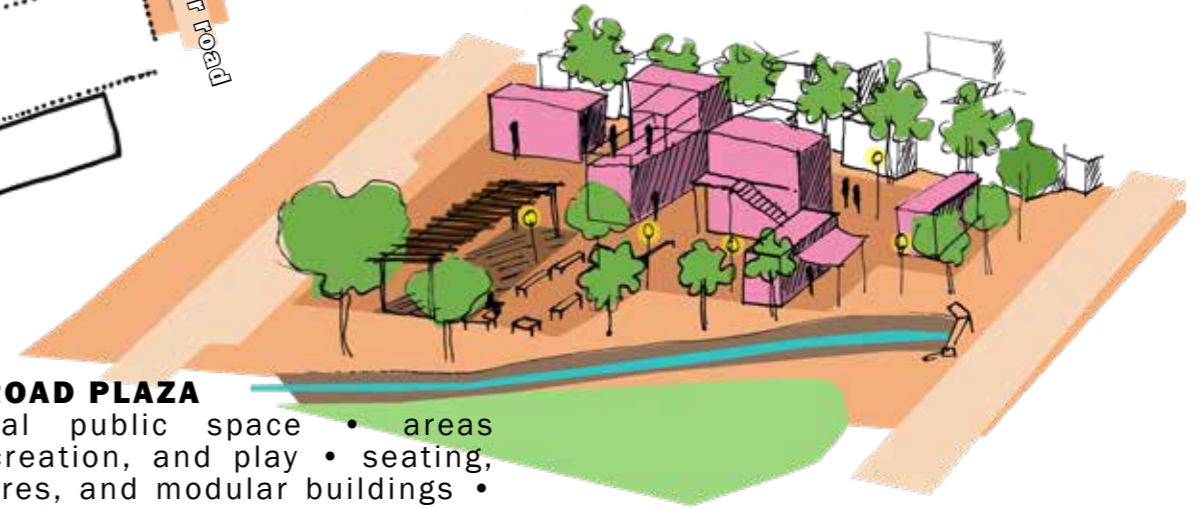




LEKKERWATER WATERPOINT

- water point
- SUDS catchment system
- seating, shade trees, and lighting
- residential interface onto public space

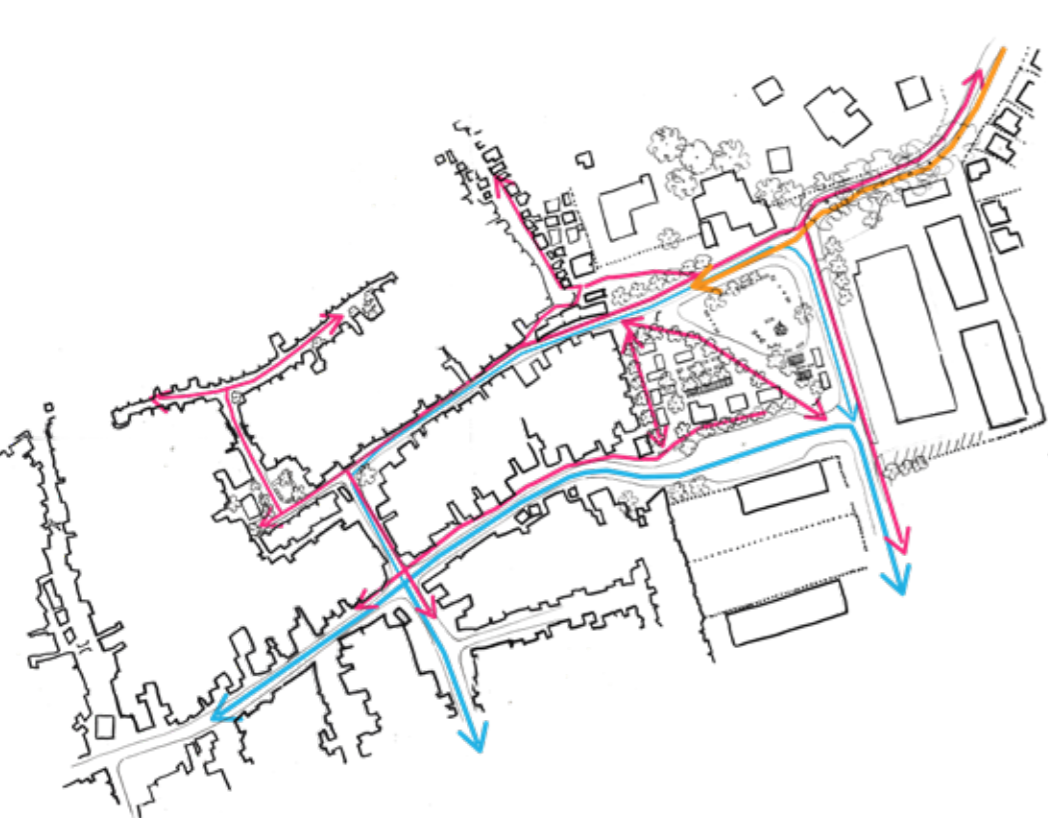
precedent: yes& studio Europe waterpoint upgrade








MASEBOLA ROAD PLAZA

- multi-functional public space
- areas for trade, recreation, and play
- seating, shade structures, and modular buildings
- residential interface onto public space

MASEBOLA ROAD INTERVENTION PRECINCT









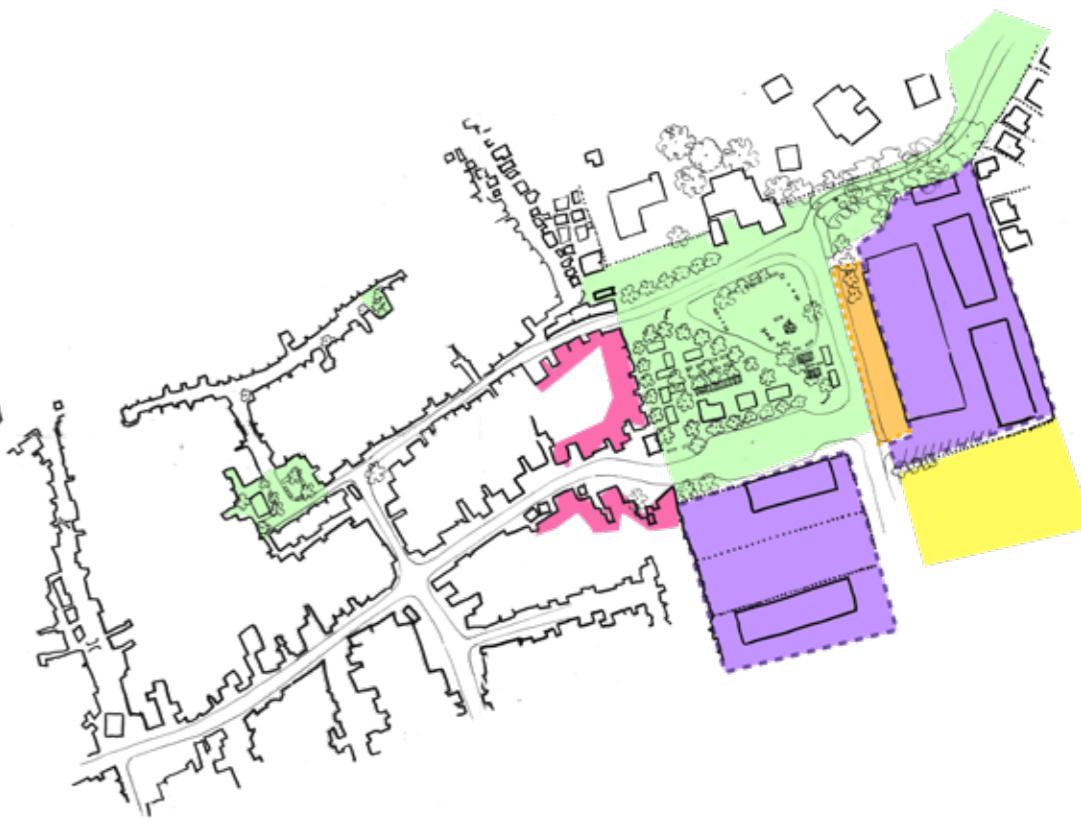
ACCESS

- bus route + stops 
- taxi route 
- pedestrian access 
- emergency vehicular access 
- taxi rank 







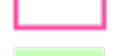
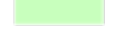


EDGES

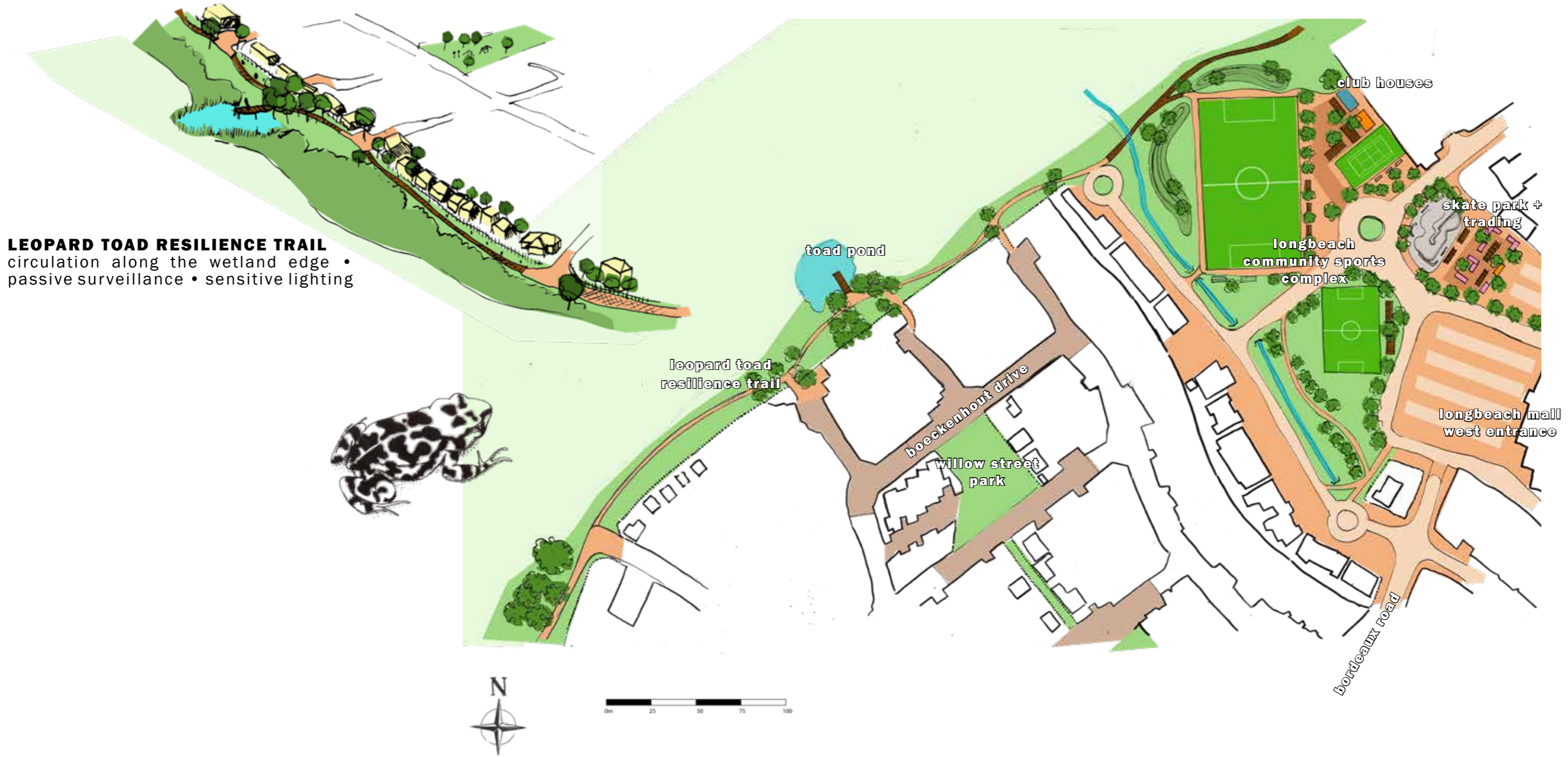
- direct residential street interface 
- residential edge with visual onto street/public space 
- newly activated commercial interface 
- enclosed retail edge 
- permeable retail edge 
- permeable light industrial edge 



ACTIVATED PATCHWORK

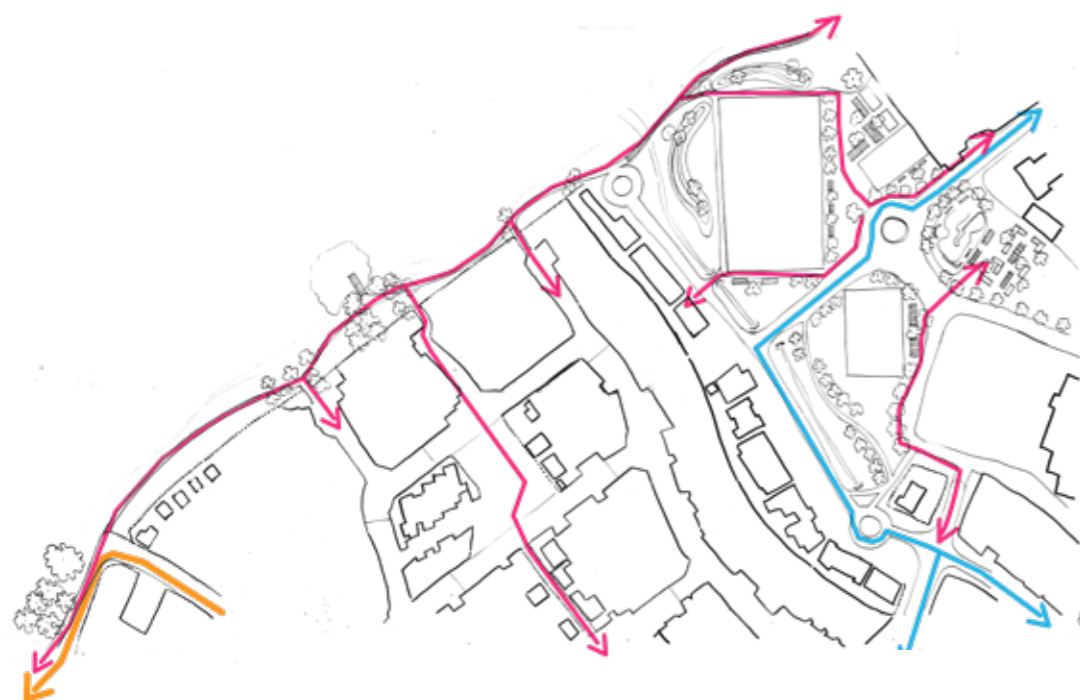
- intensifying existing light industrial 
- new residential parcels 
- intensified existing commercial/retail 
- new retail/commercial parcels 
- intensifying existing informal economy 
- new informal economy 
- mixed retail/commercial street interface 
- public open space 

MASEMOLA ROAD INTERVENTION PRECINCT








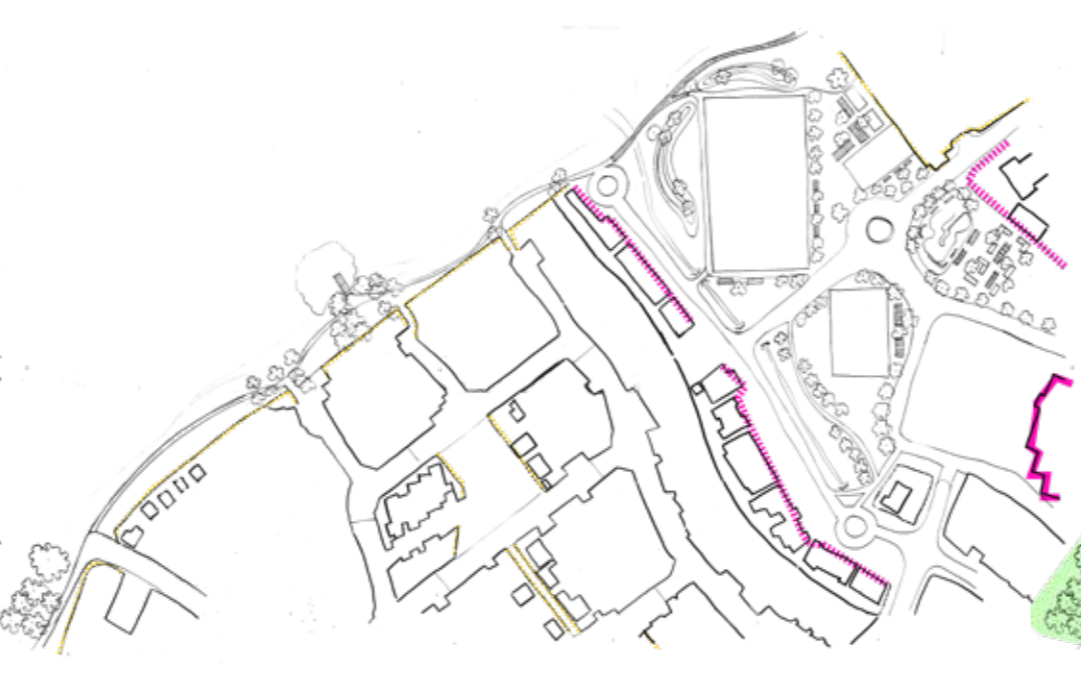
LEOPARD TOAD RESILIENCE TRAIL
 circulation along the wetland edge •
 passive surveillance • sensitive lighting

HOUMOED WETLAND ACCESS INTERVENTION PRECINCT









ACCESS

- bus route + stops 
- taxi route 
- pedestrian access 
- emergency vehicular access 
- taxi rank 











EDGES

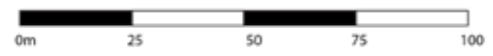
- direct residential street interface 
- residential edge with visual onto street/public space 
- newly activated commercial interface 
- enclosed retail edge 
- permeable retail edge 
- permeable light industrial edge 



ACTIVATED PATCHWORK

- intensifying existing light industrial 
- new residential parcels 
- intensified existing commercial/retail 
- new retail/commercial parcels 
- intensifying existing informal economy 
- new informal economy 
- mixed retail/commercial street interface 
- public open space 

HOUMOED WETLAND ACCESS INTERVENTION PRECINCT



UKHANYO PRIMARY CORE
 multi-use public space • NMT connection
 • existing business + restaurant complex
 • residential edge diversification



DAY








NIGHT







UKHANYO-BORDEAUX INTERVENTION PRECINCT









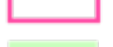
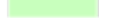
ACCESS

- bus route + stops 
- taxi route 
- pedestrian access 
- emergency vehicular access 
- taxi rank 

EDGES

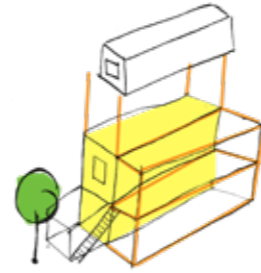
- direct residential street interface 
- residential edge with visual onto street/public space 
- newly activated commercial interface 
- enclosed retail edge 
- permeable retail edge 
- permeable light industrial edge 

ACTIVATED PATCHWORK

- intensifying existing light industrial 
- new residential parcels 
- intensified existing commercial/retail 
- new retail/commercial parcels 
- intensifying existing informal economy 
- new informal economy 
- mixed retail/commercial street interface 
- public open space 

UKHANYO-BORDEAUX INTERVENTION PRECINCT

incremental housing models that provide necessary units while allowing for residents to auto-construct to their own needs and tastes



precedent: elemental "half-a-house" incremental housing model








NTANSISO ROAD
multi-functional public node +
educational infrastructure connects
across Lekkerwater Road to new housing









NTANSISO-JUNIPER CONNECTION INTERVENTION PRECINCT









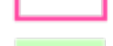
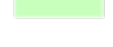
ACCESS

- bus route + stops 
- taxi route 
- pedestrian access 
- emergency vehicular access 
- taxi rank 

EDGES

- direct residential street interface 
- residential edge with visual onto street/public space 
- newly activated commercial interface 
- enclosed retail edge 
- permeable retail edge 
- permeable light industrial edge 

ACTIVATED PATCHWORK

- intensifying existing light industrial 
- new residential parcels 
- intensified existing commercial/retail 
- new retail/commercial parcels 
- intensifying existing informal economy 
- new informal economy 
- mixed retail/commercial street interface 
- public open space 

NTANSISO-JUNIPER CONNECTION INTERVENTION PRECINCT

CONCLUSION patchworks + potentials

As a resident of the Noordhoek Valley, I have been privy to its challenges and dynamic character throughout my days. The dysfunctions and juxtapositions of life in the Valley are emblematic of many of the challenges facing South African communities. Much of these can be distilled into three concerns for the Valley - how do we connect to each other? how can we connect to economic opportunities? how can we stay connected to and in harmony with our environment?

This research project aims to explore these questions, and their routes in spatial injustice. Wedged between the mountains and the sea, the pressures in the Valley have reached a near boiling point. Vying for space and opportunity, many of the unique communities are at loggerheads. Yet, the advantage of this seeming small town clinging to the edge of a provincial capital lies in the strong sense of unity that does pull together in times of need. The spatial character of the area is described in this project as disjointed, a patchwork of enclosed areas divorced from one another. By identifying the spaces under the most pressure, the project is able to strategise how to shift that pressure. The project creates new connections between the disparate residential communities and the economic core of Sunvalley. These connections are able to circulate people through and hold space for a new idea of the public realm in Noordhoek. Over time, the outcome of the project is to see the community shifting, turning its face to its neighbours and the natural beauty the area is known for. The adaptable urban fabric can develop around the framework proposed here, which in turn shifts the spatial and social economies of the entire urban system.

This is achieved through reaffirming and establishing spatial character through public space interventions. The project connects across planning divides through walkable perforations of hard urban divisions. It improves resilience through a network of safe public spaces within effective lighting and activation for around the clock utility. The project also provides dignified access to sanitation, waterpoints, educational and medical centres. These strategies develop a robust urban fabric, shifting the patchwork of spatial use from divided areas to an integrated form where new land use and intensification of existing commercial activities unlock the economic potential of the valley. This strategy of perforations to develop access and shifting edge conditions to facilitate active public space can be deployed throughout the valley to nurture the community's circular spatial, commercial and ecological economies.



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TEXTS

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FIGURES (not produced by author)

- Figure 1: Photographer Unknown. c.1910 Michael Fortune, Cape of Diab collection, public archive project. [photograph] Retrieved from
- Figure 2: Photographer Unknown. c. 1922 Michael Fortune, Cape of Diab collection, public archive project. [photograph] Retrieved from
- Figure 3: Photographer Unknown. c. 1960 Michael Fortune, Cape of Diab collection, public archive project. [photograph] Retrieved from
- Figure 4: Miller, J. (2018) *Unequal Scenes: Masipumelele/Lake Michelle*. [photograph] Retrieved from <https://unequalscenes.com/masipumelele-lake-michelle>
- Figure 5: (2019) Into Tours Cape Town. [photograph] Retrieved from <https://www.intotours.co.za/pages/noordhoek-cape-town/>
- Figure 6: Richardson, G, (2004) Gordo's panoramas from Fish Hoek. [photograph] Retrieved from <https://www.capetownskies.com/fishhoek.htm>
- Figure 7: Ernst, O. (2019) Kommetjie in Sudafrica. *Wikimedia commons*. [photograph] Retrieved from https://en.m.wikipedia.org/wiki/File:Kommetjie,_South_Africa.jpg
- Figure 8: Harris, B. (2015) The Devil came and promised a view: Offering more than coffee to Ocean View *The Daily Maverick*. [photograph] Retrieved from <https://www.dailymaverick.co.za/article/2015-01-06-the-devil-came-and-promised-a-view-offering-more-than-coffee-to-ocean-view/>
- Figure 9: Hendricks, A. (2022) Developer strikes landmark deal with families occupying Kommetjie land. *The Daily Maverick*. [photograph] Retrieved from <https://www.dailymaverick.co.za/article/2022-07-07-developer-strikes-landmark-deal-with-families-occupying-kommetjie-land/>

APPENDIX A: PLAGIARISM DECLARATION

APPENDIX B: ETHICS FORM

Declaration:

1. I know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.
2. I have used the APA convention for citation and referencing. Each contribution to, and quotation in, this project from the work(s) of other people has been attributed, and has been cited and referenced. Any section taken from an internet source has been referenced to that source.
3. This project is my own work, and is in my own words (except where I have attributed it to others).
4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.
5. I acknowledge that copying someone else's assignment or essay, or part of it, is wrong, and declare that this is my own work

Name: Emma MacArthur

28 November 2023

Signature _____

Signed by candidate



2023/06/12

EBE/00193/2023

RE: Research Ethics Committee Project Approval Letter

Dear Emma Macarthur,

Your application for ethics review of your project titled

DAILY MIGRATIONS IN A SHIFTING LANDSCAPE: facilitating a circular economy on the south peninsula

has been reviewed and evaluated by the

Engineering & Built Environment Committee.

You may proceed with your research project titled:

DAILY MIGRATIONS IN A SHIFTING LANDSCAPE: facilitating a circular economy on the south peninsula

Please note that should:

- (i) any serious or adverse effects to participants occur and/or,
- (ii) aspect(s) of your current project change and/or
- (iii) any unforeseen events that might affect continued ethical acceptability of the project occur then you should immediately report this to the approving REC. You may be required to submit an amendment to this application, in order to determine whether the changed aspects increase the ethical risks of your project.

Based on the information supplied your application has been successful and is approved.

Please note the following additional conditions associated with this approval:

- (i)

Regards,

Engineering & Built Environment Committee.