

the anatomy of **access**

re-imagining essential service provision in complex urban neighbourhoods

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Research Project 2024

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Date Signed: 25 November 2024

Signature:

CARVING OUT A PATH: Contents

Contents:	Design Development
Carving Out a Path	“PRICKS,”
	“POINTS,”
Glossary	“CLUSTERS,”
What’s In a Name?	“AND CENTRES”
	“CAN OFFER SOLUTIONS ACROSS REALITIES.”
Abstract	
The Research Project	Design Implementation
	“TARGETING KEY CONCERNS OF RESIDENTS”
Problem Statement	“IN CONTEXT SPECIFIC EXAMPLES”
“THE WAY CITIES ARE MADE”	“DEMONSTRATES THAT A PHASED APPROACH”
“DOESN’T WORK IN ALL CONTEXTS”	“CAN USE STRATEGIC ACTIVE ZONES TO DEVELOP SAFETY ROUTES”
“CREATING COMPLEX URBAN REALITIES”	“WITH MULTI-FUNCTIONAL & SEASONAL BENEFITS”
“IN NEIGHBOURHOODS SUCH AS DUNOON.”	“TO CREATE A FRAMEWORK OF NEIGHBOURHOOD STRUCTURING”
	“THAT REMAINS GROUNDED IN CONTEXT”
The Research Question	
	Conclusion
Analysis & Findings	“TO PROMOTE A CHANGE”
“THESE REALITIES CAN BE EXPLORED THROUGH”	“IN HOW CITIES CAN BE MADE”
“SCALES OF ACCESS,”	
“SCALES OF RECOGNITION”	Ethical Considerations
“AND SCALES OF INFRASTRUCTURE”	
“REVEALING A NEED FOR NEIGHBOURHOOD STRUCTURING”	Acknowledgments
Design Intention & Concept	References
“USING THE PRECINCT SCALE”	Swimmers Of The Same Tide
“AND AN UNDERSTANDING OF THE COMPLEX URBAN OF DUNOON,”	
“ENCOURAGES A SERIES OF DESIGN PRINCIPLES”	Appendices
“THAT ENABLE SCALABLE SPATIAL STRATEGIES,”	University Consent
“PAIRED WITH SCALABLE OWNERSHIP STRATEGIES”	Participant Informed Consent
“FOR FLEXIBLE AND STRUCTURED NEIGHBOURHOODS”	
“SENSITIVE TO USER AND STATE NEEDS”	



What's In a Name?

Glossary



Image Source: Authors own image



Image Source: Authors own image

PLANNED

refers to the 'formal' built environment that is government or state sanctioned and therefore occupies a higher degree of legality and acceptance (Roy, 2011)

UNPLANNED

refers to traditionally referenced 'informal' built environment, extending its vocabulary understanding by including terms such as auto-construction (Kamalipour & Dovey, 2017), squatting and repairing (Bhan, 2019), quiet encroachment (Bayat, 2013) and peripheral urbanisation (Caldeira, 2017)

AUTO-CONSTRUCTION

(Kamalipour & Dovey, 2017)

Full or partial self-building of private space such as homes or home-based businesses, often not in compliance with building regulations and safety concerns.

REPAIRING

(Bhan, 2019)

Paired with Caldeira (2017) on upgrading, it refers to self-driven, self-built dwelling upgrading overtime. It offers a lens to acknowledge that the building is never finished but always improving and 'growing' through interventions. The term offers a useful way to view the city and larger scale urban environments - never finished, never static.

QUIET ENCROACHMENT

(Bayat, 2013, p. 35)

"refers to non-collective but prolonged direct actions of dispersed individuals and families to acquire the basic necessities of their lives in a quiet and unassuming illegal fashion."

PERIPHERAL URBANISATION

(Caldeira, 2017)

A new way of understanding urban expansion in the global south that explores periphery beyond expansion of urban towards and beyond the margins (Caldeira, 2017, p. 4). It explores peripheral urbanisation as layered processes and complexities (such as agency, transverse operation, temporality) operating and producing outcomes simultaneously that constantly reinforces its progression.

STATE

(Jaglin, 2014)

Reference to the state in this project takes lead from Jaglin (2014) in defining the institution conventionally responsible for service provision, housing and other essential services. The 'state' refer to ranging tiers of government; local, provincial and national, that play a role in making and shaping of cities - through the built environment and politically (Caldeira, 2017). As with the complexity the project deals with, this research acknowledges the complexity attached to state responsibility and hereafter where the term state is used, it is important to note that it referred to as an institution, it does not refer directly to individuals working with or for government.

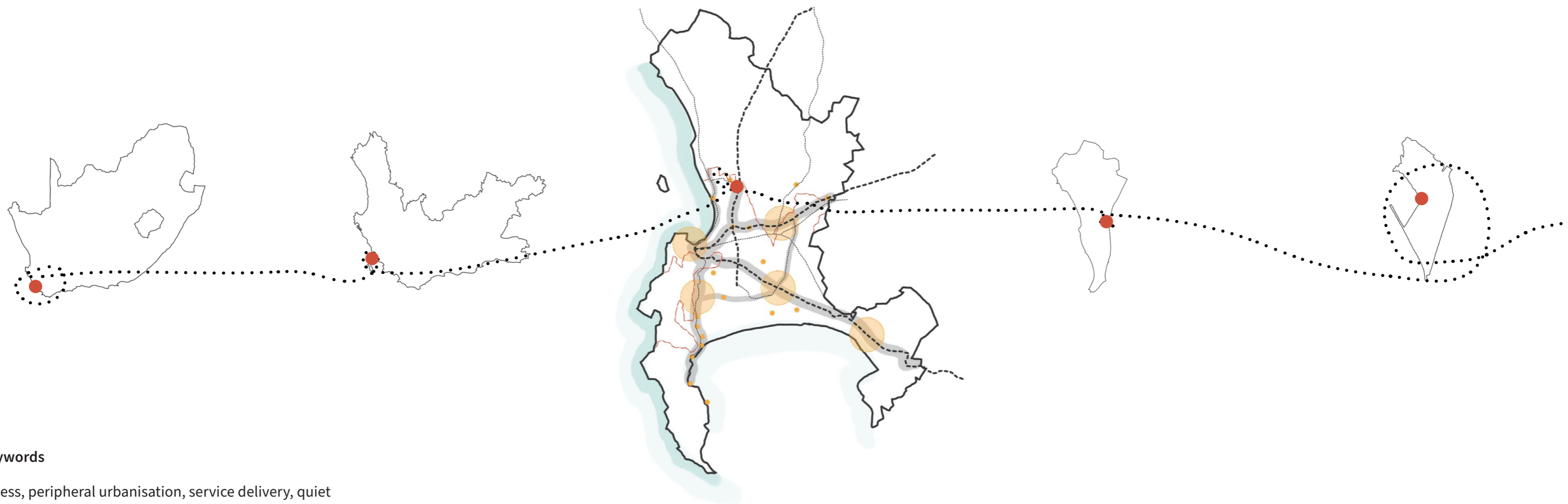
USER

(Jaglin, 2014)

The user referred to across the project is the 'end-user' of a service conventionally provided for by the state. Taking lead from Jaglin (2014), it acknowledges the user, people, marginalized groups as active participants in these processes where state provision remains insufficient.

“ABSTRACT”

Executive summary



Keywords

access, peripheral urbanisation, service delivery, quiet encroachment, mobility, public commons

Research Question(s)

What are the spatial implications of individually driven neighbourhood-making processes on the spaces of collective occupation in Dunoon?

Then following that, how can urban design intervention reimagine the way in which state and user interact in complex urban environments to allow for safe and equitable conditions within these diverse urban realities?

“ABSTRACT”

Executive summary

Nearly three decades after end, the spatial legacy of Apartheid still scars the Cape Town landscape. Large urban centres remain the key destinations for peripheral suburbs and townships placing increasing pressure on the landscape as rapid urbanisation is underfoot, constantly altering the urban fabric both on the edge and within lower-income accessible neighbourhoods. These shifting states of existence produce vulnerabilities that make it difficult for access by the state for effective service provision in these neighbourhoods.

This project looks at this reality of access for people living in Dunoon, a dense residential area that sits immediately south of the junction of the N7 and Malibongwe Drive. Dunoon is investigated in relation to the larger Blaauwberg District and the greater Cape Town Metropolitan and this macro analysis is paired with the more micro analysis gained from contextual nuances of the neighbourhood. The project will make proposals for reimagined service provision that claims space within the public realm as a common amenity in the dense character of the neighbourhood.

I look to scholars of the Global South where, relating to this concept of peripheral urbanisation and self-constructed neighbourhoods, writing includes work by

Bayat (2013); Caldeira (2017) and Roy (2011) which become crucial to grounding the research in real-world Dunoon life. Further writing on systems and infrastructure that offer deeper understanding of existing access & service models and their shortfalls in provision in a South African context are also explored (Hanyurwumutima & Gumede, 2021; Jaglin, 2014; Larkin, 2013).

Building on the academic conversations surrounding these topics, the research explored the spatial implications of individually driven neighbourhood-making processes on the spaces of collective occupation in Dunoon? From the research, which was undertaken using critical theory, desktop study, site visits, model building and storytelling, findings directed the question of how urban design intervention could reimagine the way in which state and user interact in complex urban environments to allow for safe and equitable conditions within these diverse urban realities.

Proposal for neighbourhood structuring intervention that combines scalable spatial strategies of pricks, points, clusters and centres with scalable ownership strategies, allowed a reimagined way of working in complex urban environments like Dunoon and offers new ways for city-making in the future that accommodates rapid urban growth.



Image Source: Authors own image overlaid on Google Maps Image (2024)

The Research Project

Introduction & Positionality

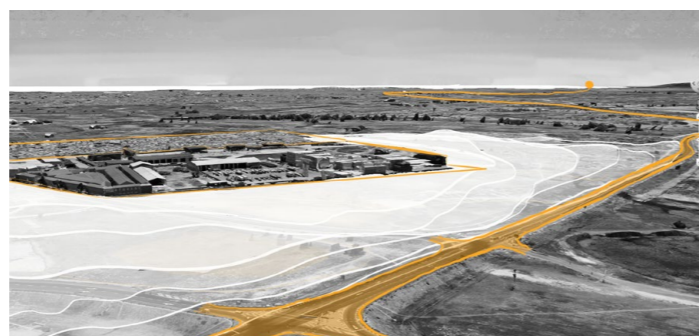
WHY / (positionality)

This research project was born from a growing interest that was inspired over years of driving to work in Blouberg passing the Dunoon Residential area. Initially, Dunoon sat out-of-sight-out-of-mind along this journey. However, over time, Dunoon made itself visible to the passersby. Slowly, unobtrusively, like the beginnings of high tide, the presence of self-constructed dwellings began to claim the open field that was previously, unofficially, designated for soccer on Saturdays by Dunoon residents. As the Covid-19 pandemic hit, the pace of auto-construction of these dwellings rapidly picked up as the tide began to rise to the edge of the road - the space I occupied in my car. Returning to work after the lockdown, my journey to work was entirely altered along the stretch passing Dunoon. The tide of auto-constructed dwellings had risen to their peak along the road, creating a new interaction that saw many people living & making a earning alongside the road.

As this tide of claimed space rose, so did my interest in Dunoon, its lived realities in comparison to my own and how its expansion relates to its varying states of peripheral existence. Watching others brave the winds and the cold alongside strings of cars that hosted singular passengers, I struggled with how space could be quite so exclusionary and inconsiderate. With each passing drive, the beginnings of this research project were born. The questioning of movement systems designed for cars only, the questioning of lack of movement infrastructure designed for pedestrians, the questioning of the term 'right to the city' - who is this for? Situated in this notion of development and expansion, my interest lies in the future of Dunoon from both within and looking outwards to its progressing neighbours. I sought to explore what reality currently looks like for Dunoon residents and what potential it holds to offer.

WHERE / (locality)

Located along the inland edge of the West Coast of the well-known Cape Town Metropolitan, the area of study for this project is a neighbourhood called Dunoon. It is a post-apartheid township established two years after South Africa achieved democracy. However, due to its beginnings stemming from the relief of an existing apartheid-township, the area remains in the lingering grip of an apartheid reality which demonstrates fragmented spatial reality. It remains a largely singular Black demographic echoing work by Katumba et al. (2023) about limited exposure to different race groups within previously designated Black townships. Additionally, it presents the same race-to-class driven patterns put forward by Geyer and Mohammed (2016) that establish the area as a lower-income accessible neighbourhood that often sees higher income movement out of the neighbourhood. For this study, Dunoon but will include the extents of Doornbach, its direct adjacent. The reason for this is twofold: (1) Their development has progressed parallel and in relation to each other since the inception of Dunoon and (2) current facility provision is located largely within Dunoon which creates a dependent state of Doornbach on Dunoon.



WHO / (users)

At the risk of sounding vague, the project is about the residents of Dunoon. Their proclaimed existence through the claiming of land and auto-construction of both home and neighbourhood (Caldeira, 2017; Kamalipour & Dovey, 2017) was the catalyst for interest in the area. However, it is important to note that the term 'resident' within Dunoon holds a complex, layered reality that shifts according to recognition and perspective. Dunoon residents hold a mixture of Cape Town local, inter-provincial and international statuses that all occupy varying versions of permeance or temporality in the neighbourhood, resulting in varying versions of a person's 'right-to-Dunoon'. This project therefore focuses on the public of Dunoon. As residents shift in and out of certain realities based on their day to day, occupying different spaces, either public or private, the project focuses on the residents of the public realm within Dunoon.



HOW / (methodology)

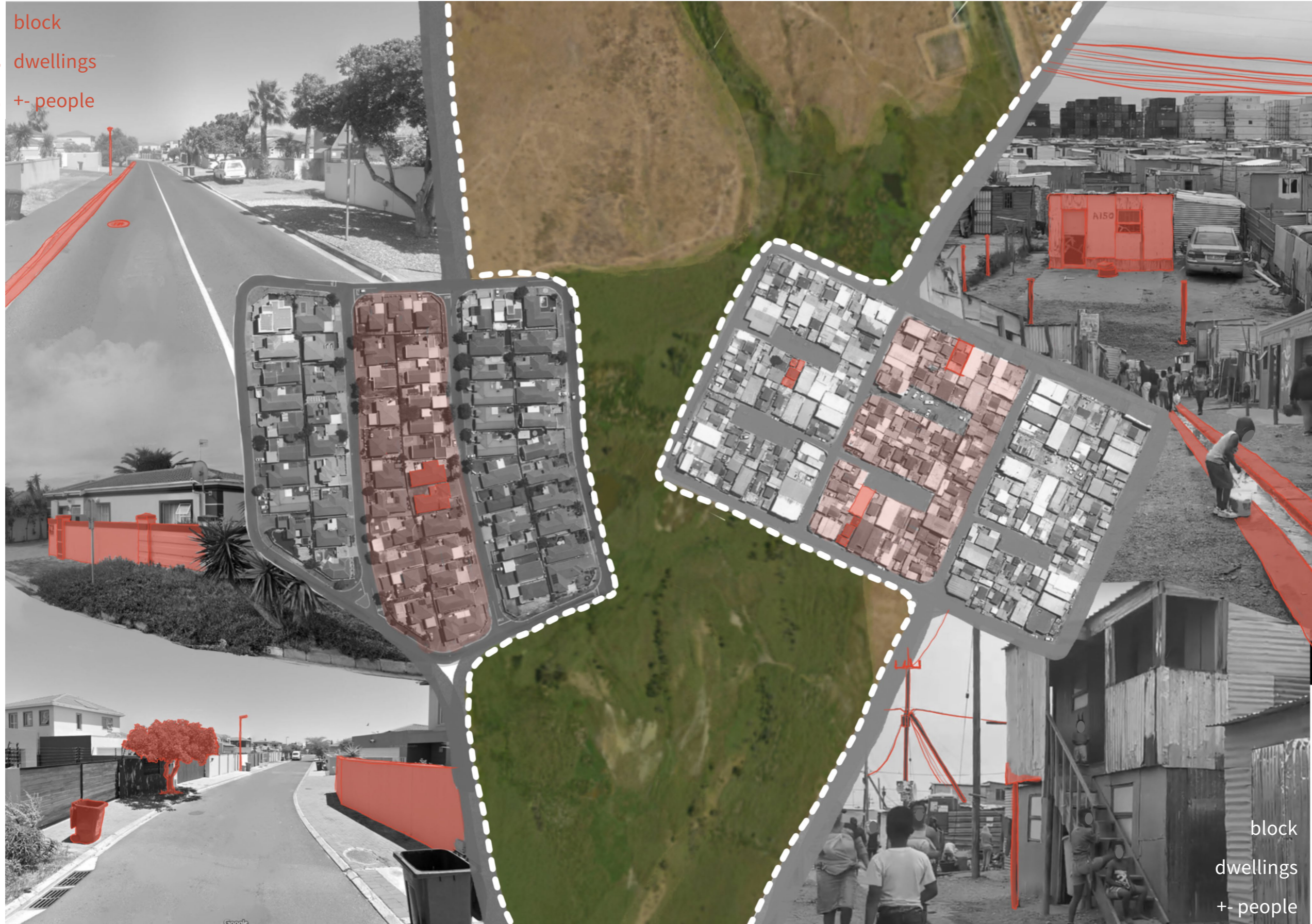
This is done through a mixture of methods that enable a thorough exploration of the context and the concepts of mobility and access. Using a mixture of critical theory, investigative mapping, site drives, interviews with Dunoon residents and storytelling, the project has been led beyond the initial point of interest of mobility to that of access, choice and quality of life.

A mixture of these methods in exploration of the topic has offered deeper insights into the context, enabling the unpacking of the areas complex realities and has enabled the exploration to continue throughout the project. With critical theory applied along the journey, the project was constantly held accountable to my peers and the 'giants' on whose shoulders my research is built. Informed by mapping as a top-down exploration and site drives as a bottom-up experience, interviews with residents from Dunoon offered accountability and confirmation to my own findings. Finally, the collection of these methods uses storytelling as a testing of the design process - ensuring that design and research are never separated but were constantly questioning design decisions, forcing constant return to the research process, informants and findings.



Conceptual exploration of 'rising tide' urban fabric in Dunoon visible from driving route. (Google Earth Image with Authors own impressions)

01 block
24 dwellings
96 +- people



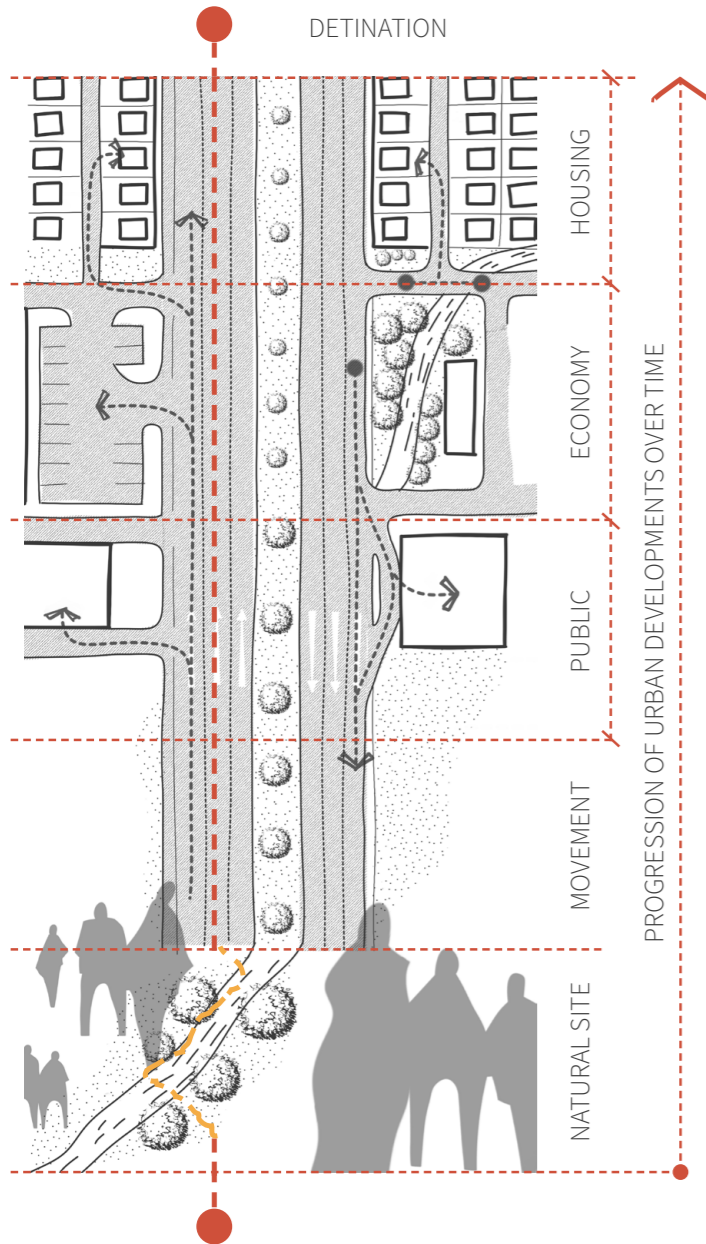
block 01
dwellings 126
+- people 378

Impressions and Images of Table View Area adjacent to Dunoon in Cape Town
Street View Images from: Google. (2024). In. Google Maps.

Impressions and Images of Dunoon & Doornbach focus area in Cape Town
Street View Images from: Isibane, O. (2022), Google. (2024). In. Google Maps.

“THE WAY CITIES ARE MADE”

Problem Statement



THE SHAPING OF THE PLANNED URBAN

plan exploration and adaptation of 'LAYERS OF URBAN STRUCTURE' through movement lens. Original Figure Source: Dewar & Todeschini, 2004, p. 6 Figure 1.1

The development of what Freud refers to as our 'auxiliary organs' over time, especially in the realm of movement, is an incredible journey to witness. In the South African context, (Dewar & Todeschini, 2004a) showcase the progression of these 'organs' over time. Beginning with their God-given feet, humankind extended their mobility organs to include the horse and cart, then furthering the auxiliary capacity through the tram and thereafter the train all the way until today with the highly modern individually owned cars and large freeways (Dewar & Todeschini, 2004a, p. 7 Table 2.1). This not to mention the wonders of the airplane and ship – all so far progressed in their original function that they now offer leisure and recreational options. (Larkin, 2013, p. 332)

However, to both the success and failure of this 'auxiliary organ progression' across the globe, most of the urban suffers a degree from its own accomplishment and the resulting space it is has created. Dewar and Todeschini (2004b) speak to the spatial impact of this success in the South African context, noting a detrimental shift from streets, which speak to the original 'foot' that allowed for a range of activity, to roads which exclusively cater to cars and have lost their friendly multi-use function.

Where our pedestrian-orientated mobility previously enabled wayfaring through 'wandering around' (Ingold, 2006, p. 26), and places of activity that would subsequently develop along these journeys, our current modernist vehicular-dominated roads promote destination-orientated movement resulting in a largely fragmented urban grain. In South Africa, the duet of both modernist and apartheid planning approaches has leaned into what

the car has to offer and thus created bustling central business districts, quieter suburb outskirts and out-of-sight industrial areas; neatly requiring that no function interrupt the other (Dewar, 2016).

Despite numerous scholars and activist groups lamenting this continued approach, we continue to reproduce an urban picture shaped by modernist, apartheid and global north influence. By fore-fronting these roads in the construction of new developments, the 'planned city' anticipates a narrow definition of those who belong to the city based on those accepted & refused (Simone, 2013). In turn this creates an urban landscape where only few are welcome. As car-dominated movement systems are increasingly taken for granted, I believe that the infrastructure of movement has now become the dictator of spatial planning which continues to perpetuate a degree of control over the inhabitants of the urban realm. To reference a very clever car advertisement, by way of making this argument, the Saturn Ion commercial released in 2007 showed people following the rules of the road without the 'sheet metal' of the car.

What was evident was the absurd amount of space allocated to cars, in comparison to pedestrians as a result. The advertisement ironically displayed, more prominently, the impact of car-dominated systems on space than it did its own brand. More than appreciating the honesty, the video leaves one with the question – "what about those who do not own a car?" It reveals a fragmented urban system, divided and connected by these movement systems. In effect what is offered up is the notion that the city may not work equally for all, pushing for a reevaluation of the term and type – urban.

(the planned)



THE PRIORITY OF THE PLANNED URBAN

image extract from Saturn Ion commercial (2007) advertisement demonstrating car space allocation in comparison to pedestrian allocated space



THE SCALE OF THE PLANNED URBAN

image extract from Saturn Ion commercial (2007) advertisement demonstrating the lack of human scale in car parking spaces when occupied by pedestrians

“DOESN’T WORK IN ALL CONTEXTS”

Problem Statement

“Many infrastructural projects are copies, funded and constructed so that cities or nations can take part in a contemporaneous modernity by repeating infrastructural projects from elsewhere to participate in a common visual and conceptual paradigm of what it means to be modern.” (Larkin, 2013, p. 333)

Many scholars with an interest in the urban condition offer, in their piece, statistics and comment pointing to the exponential growth trajectory of the global urban and the projected population increase especially in the global South. Africa, in particular, has the attention of such discourse by authors such as Mbembe (2016, pp. 3-7) and Pieterse (2011, pp. 7-8) to name a few. Alongside the urban potential and its growth, it is also acknowledged that ‘urban’ as a concept requires new understanding, a sentiment shared by both planetary and post-colonial theorizing parties despite their differences in theory (Brenner & Schmid, 2015; Pieterse, 2021). However, despite the ‘global trajectory’ of urban growth, it is important to recognize the distinct differential reference points that generate urban theories on how these new understandings should be derived, collected and represented.

The often-called-on terms Global North and Global South by mere usage imply distinction. The implication of these two separate terms is that they hold vastly different understandings of the urban as an existing entity and future ideal. Difference can also be found in how the two reference points view each other and the implication of

these views on spatial outcomes. For example, certain African investment may be seen as a ‘unprofitable’ by large Northern-dominated powers as noted by Simone and Pieterse (2018, p. 41) in their collective work while Mbembe (2016, p. 5) positions Africa as the place where the global future will be determined. One view, situated within the North, refuses Africa whereas another, situated within the South determines an entirely different lens of its potential. If these North/South perspectives are to be so distinct then it follows that their treatment should be too, accounting for that which the context has to offer.

However, history – colonial, post-colonial and modernist – has and continues to encourage the use of ‘conventional’ models from the North within Southern urban systems. These are those that have been derived from conditions and needs of the Northern urban. Sylvie Jaglin (2014) writes a paper on the regulation of service delivery systems. Her paper focuses largely on electricity delivery with other authors such as Bakker et al. (2008) and Larkin (2013) touching on water service delivery. These writings, with the Jaglin (2014) paper in particular, reference this ‘conventional model’. In summary, this is a model that assumes the same typology of urban, the same user requirements within this urban and it requires that the state provides equally to all this particular service.

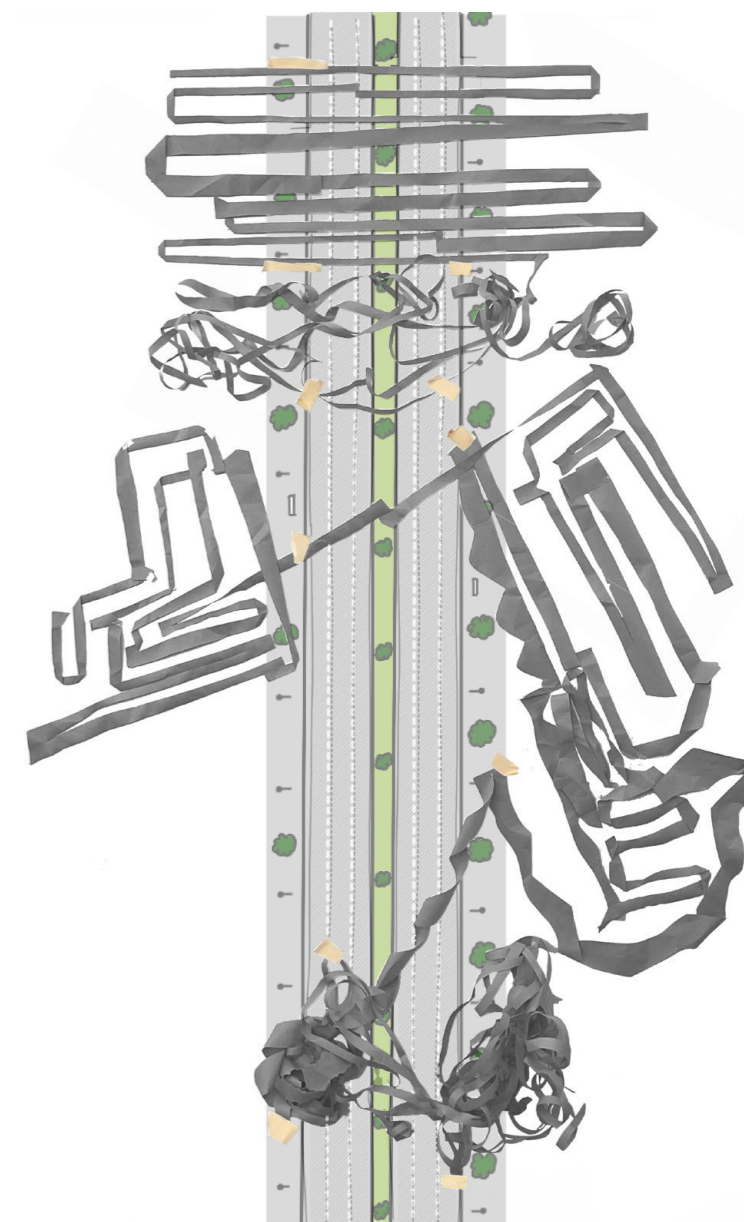
Noting that these are models born out of Northern and colonial planning practices, Jaglin (2014) points out that in many a Southern context, this is insufficient a model because it is based off the copy image of a city where

the specific context often has its history entrenched with major ‘outsider’ root and influence. These then become models which do not adequately provide for the reality of a context as it assumes the resources of the provider, the needs of the users and cost-recovery concepts of tax and other paybacks. (Jaglin, 2014; Larkin, 2013; Simone & Pieterse, 2018)

Most easily likened to forcing a round peg in a square hole, it is precisely through the limited ability of the conventional service delivery model to provide for all contexts that I would argue for the extreme importance of developing situated understanding from the South. This in addition to the incredibly specific context to which a matter is being referred.

While the urban may be seen as a global phenomenon, it cannot be said that the urban exists in the same way everywhere or that its conditions are even remotely similar across different contexts. Here it would be helpful to begin first by defining ‘urban’ as a concept through both the context and the conversation at hand. Drawing on authors such as Ananya Roy (2011), Gautam Bhan (2019), Asef Bayat (2013) and Teresa Caldeira (2017) among others, there is existing work that begins this by encouraging reimagination of vocabulary, theory and understandings of the urban to shift the lens from North to South, from top-down to situated. It is with their work in mind that we can look at existing urban conditions of the South and begin to fashion a square peg for the square hole.

(the global south)



Conceptual artefact exploration of how different urban typologies could react to a singular model option. Despite a ‘common thread’ their results do not share the same sentiment of the ‘common visual’ for success. Based off Larkin’s quote (2013, p. 333)

“DOESN’T WORK IN ALL CONTEXTS”

Problem Statement

In South Africa, what is referred to as the planned urban, is an urban that is derived from this ‘conventional model’. It does not always consider the historic and resulting realities that exist in the different local contexts and as a result, produces an insufficient planned urban which begins to create an appetite for what then is considered as the ‘unplanned’.

The concept of peripheral urbanisation as brought forth by Caldeira (2017) with the support of previously mentioned academic peers is one that assists in the unpacking of this term ‘unplanned’. Rather than reverting to the limitation of the term ‘informal’ implying it a singular comparative to ‘formal’, peripheral urbanisation explores the urban reality from a vastly different lens. Acknowledging the previously addressed immense population growth and increased urbanization across the global south, peripheral urbanisation offers a way to understand the production of an urban where the ‘planned’ remains insufficient.

The pairing of this concept, with that of the work of Asef Bayat (2013) on quiet encroachment, approaches a practical way to understand what these modes of urban production looks like. In essence, the urban that unfolds over time is a mixture of contexts that often have limited state involvement in some and overly sufficient state presence in others. It is an urban where there is development adjacent to city centers in the form of urban sprawl or urban densification within already established areas or both. The urban that unfolds is one where new spaces, economies and politics are created as the individuals operate in constant negotiation for survival, claiming and defending a space for themselves within

the city. This urban is not one of a singular user, reality or typology but one that offers diverse existences. (Bayat, 2013; Caldeira, 2017; Simone, 2013)

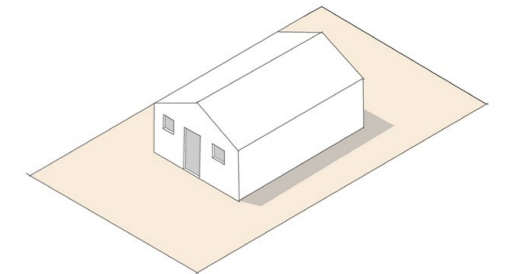
Authors such as Kamalipour and Dovey (2017) and Bhan (2019) further assist this broadened mindset of parallel urban conditions by offering new vocabulary to better communicate what this ‘unplanned’ or ‘informal’ means. Pulling away from the binary of ‘either-or’, we begin to understand complex urban realities developed through processes such as auto-construction, squatting, repairing, claiming, encroaching and defending. Through these, we understand that space can hold multiple of these realities in one moment, as layers that are constantly shifting and changing both in isolation and in relation to other layers of reality. It therefore becomes evident that in many contexts, the conventional urban model falls short as users “build not only their own houses, but also frequently their neighbourhoods” (Caldeira, 2017, p. 3) in a way that unintentionally but very decidedly contests an urban fabric that is car centered and entrenched in outdated narratives.

It is important to note that while this mode of producing space is one that often (and sometimes romanticizing-ly) celebrates the resilience of people and the ability to adapt, it also holds many vulnerabilities. These spaces and neighbourhoods often, due to their contested existence suffer a different set of liabilities such as improper or insufficient service provision, exposure to unsafe building practices and higher crime, waste dumping and health problems due to limited state presence. (Ewing & Krause, 2021)

(the unplanned)

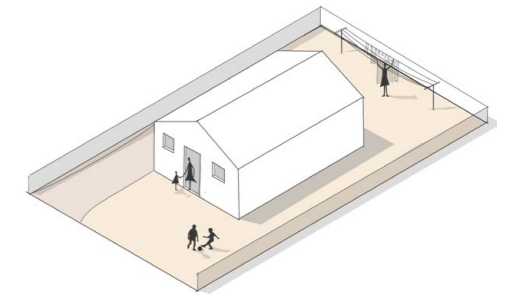
DEMARCATÉ / ALLOCATE

Bayat, A. (2013)



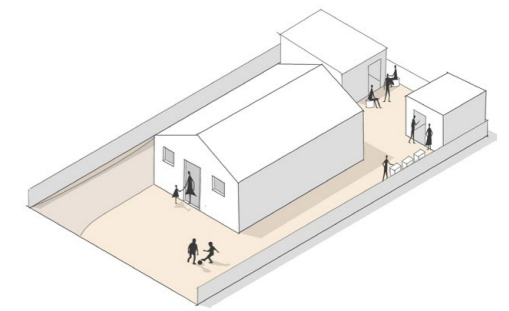
INHABIT

Bayat, A. (2013)



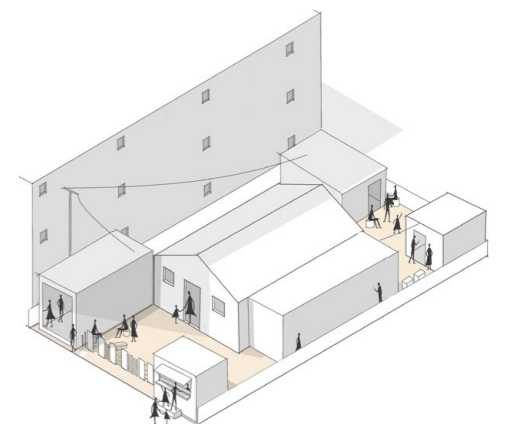
EXPAND

Bayat, A. (2013)



UPGRADE

Caldeira, T. P. (2017)



“CREATING COMPLEX URBAN REALITIES”

Problem Statement

(the [un]planned)

The challenge offered by these diverse layered realities is that, because of their alternative condition, many a government seeks to ‘formalize’ the ‘informal’, to ‘re-plan’ the ‘unplanned’. It is a binary mindset that has previously and continues to leave the state slow to react to the condition of the urban on the ground which ultimately exhibit constant varying degrees of urban realities (Bertelsen et al., 2014). What then results and builds in intensity is the gap between users - the people occupying and creating the urban - and the conventional service delivery model that is expected of the state. The inability of the state to grapple with the complexity and rapid nature of change that exists in these contexts creates varying levels of intense vulnerability within these contexts as intra-neighbourhood realities often require competition for basic resources.

These challenges are further aggravated by the relationships these contexts hold with surrounding neighbourhoods that are accepted as planned. While apartheid saw racial segregation between neighbourhoods, today’s reality reveals class-driven segregation (Geyer & Mohammed, 2016). For many neighbourhoods previously classified for people of colour, the class status holds the neighbourhood ransom to a continued apartheid legacy (Katumba et al., 2023). Standing as spatial evidence of this, in many areas in South Africa, are stark differences between neighbourhoods, often being held at arm’s length by buffering elements such as highways, industrial areas, wetland strips or even the simple boundary wall (Miller, n.d.). While all neighbourhoods experience their own varied degrees of planned and unplanned, upper-class neighbourhoods tend to enjoy the luxuries of state recognition while lower class neighbourhoods experience aggravated realities of state neglect. (Miller, n.d.)

What continues to build is the tension experienced within and across neighbourhoods which constantly adds to its complex existence making it challenging in any offering towards addressing quality of life that is derived from these diverse living conditions.



HIGHWAY BUFFERS

(left) Dunoon auto-constructed dwellings and (right) De Zicht Estate, Richwood divided by the N7



NATURAL BUFFERS

(left) Rivergate Housing Complexes, Parklands and (right) auto-constructed extension of Dunoon & Doornbach separated by the Diepriver



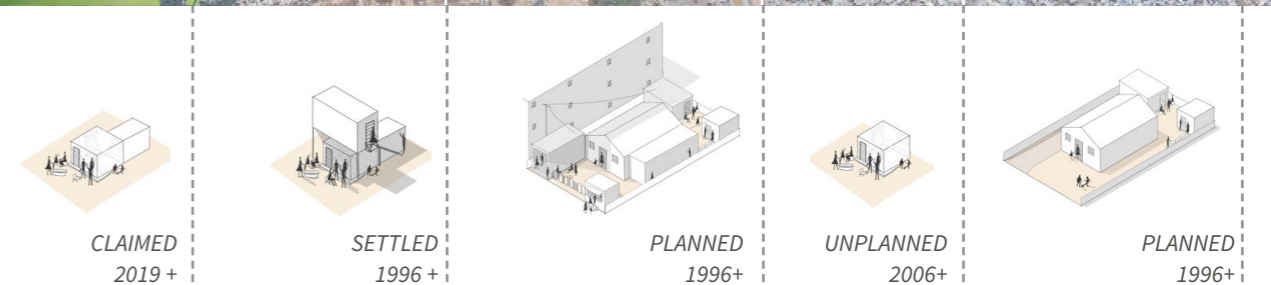
NATURAL AND INDUSTRIAL BUFFERS

(left) Parklands and Tableview residential area and (right) auto-constructed Doornbach



INTERNAL COMPLEXITIES

portion of Doornbach & Dunoon neighbourhood capturing varying settlement and urban density characteristics built over time



“IN NEIGHBOURHOODS SUCH AS DUNOON.”

Context Introduction

(urban periphery)

The focus area of this project, Dunoon, a growing township on edge of the Blaauwberg District in Cape Town, South Africa. It is a neighbourhood that experiences these complex urban (un)planned realities and offers a useful site for exploration to begin looking at alternative ways of addressing vulnerabilities across varying urban existences.

... as geographical periphery ...

Dunoon sits largely separated from its neighbouring areas by the Diep River catchment and wetland corridor formed by the river to the east and the N7 to the west. It currently maintains an urban edge condition; a geographical periphery, locking onto the edge of existing urban fabric and tucked in between a mix of industrial and farmlands which are now increasingly being developed as a mix of residential estates and business parks. In time it is anticipated that will no longer sit on the topographical edge (City of Cape Town, 2023) and what becomes a matter for urgent attention is the way the neighbourhood will relate to its future neighbours.

... as on the margin...

To explore the historical development of Dunoon, one must first look to its parent, Marconi Beam. Marconi Beam was initially established as a Black only neighbourhood in the middle of a Whites-only-Milnerton during the Apartheid Era. Marconi Beam residents were intended to serve the Milnerton Racetrack as stable hands or other similar jobs. Over the years, the residents of Marconi Beam increased, finding other job opportunities in places like Montague Gardens and Killarney Gardens. Due to the increase in population, Dunoon and Joe Slovo, were identified as alternative sites for the ‘overflow’ residents at Marconi. Many Marconi residents were relocated to

Dunoon and in the year 1996, a new neighbourhood began to emerge and grow. (Saff, 1996)

Initially work attraction remained along the Marconi, Montague Garden and Killarney industrial stretch along Koeberg Road (Freedom House, 2017). The work offering has however, increased to areas like Blouberg, Parklands and Tableview among other further areas over the years. Currently, one of the industries that Dunoon residents have access to and is the source of many jobs in the area is the construction sector surrounding the Blouberg and Parklands areas. With Dunoon well-situated close to existing and new developing residential, commercial and industrial sites, it is not uncommon to see a number of Dunoon residents along Malibongwe Drive in the morning waiting for a call from one of the many passing construction vehicles.

... as transitional...

Dunoon’s state of periphery sits as a valuable exploration for several reasons. Firstly, as an urban edge, Dunoon locks into the greater Blaauwberg and Tableview Districts. Considering Brenner and Schmid (2015) and the notion that the “primary driver of space in this day and age is capital”, Dunoon sits as an increasingly attractive transitional space in this ‘capitalist urban’, able to provide access to the larger, more affluent surrounding areas which provide access to jobs with Dunoon itself offering affordable backyard housing rentals or auto-constructed housing practices. The neighbourhood is an attractive invitation to for a mixture of migrating and immigrating interests of lower-income classes because of its connection to both affordable living spaces and relatively closely accessible working conditions.



“IN NEIGHBOURHOODS SUCH AS DUNOON.”

Context Introduction

(shifting periphery)

... as illegal ...

What then follows is a ‘derived condition’ of this primary notion of capitalist urbanization. Dunoon, intended for ‘overflow’ residents of Marconi Beam, now grows along with its adjacent neighbours producing an ‘informal’ urban that sits in service of its ‘formal’ counterparts (Brenner & Schmid, 2015, pp. 172-175). Over time, Dunoon has shifted in its condition as periphery in the ‘illegality’ of the neighbourhood as a progressively auto-constructed and auto-upgrading settlement while it serves the legality of developing surrounding areas and neighbours by providing workers, cleaners and other roles (Roy, 2011). It is important to note that Doornbach, Dunoon’s direct adjacent is considered as part of the focus area for this study. Developed as an auto-constructed settlement parallel to the development of Dunoon over time, the areas are profoundly linked with Dunoon operating as a ‘centre’ of provision. Doornbach continues to lack sufficient service provision on the premise that illegally occupied land cannot be state serviced (Snaddon et al., 2019). It is therefore considered as dependent on the primary focus area of Dunoon and will subsequently be included in the term Dunoon.



1996



2002



2006



2019



2021



2023

Image depicting focus area growth over time. Base Image: (City of Cape Town, 2021) - Map Viewer

• D U N O O N •



Image Source: Authors own image

The Research Question

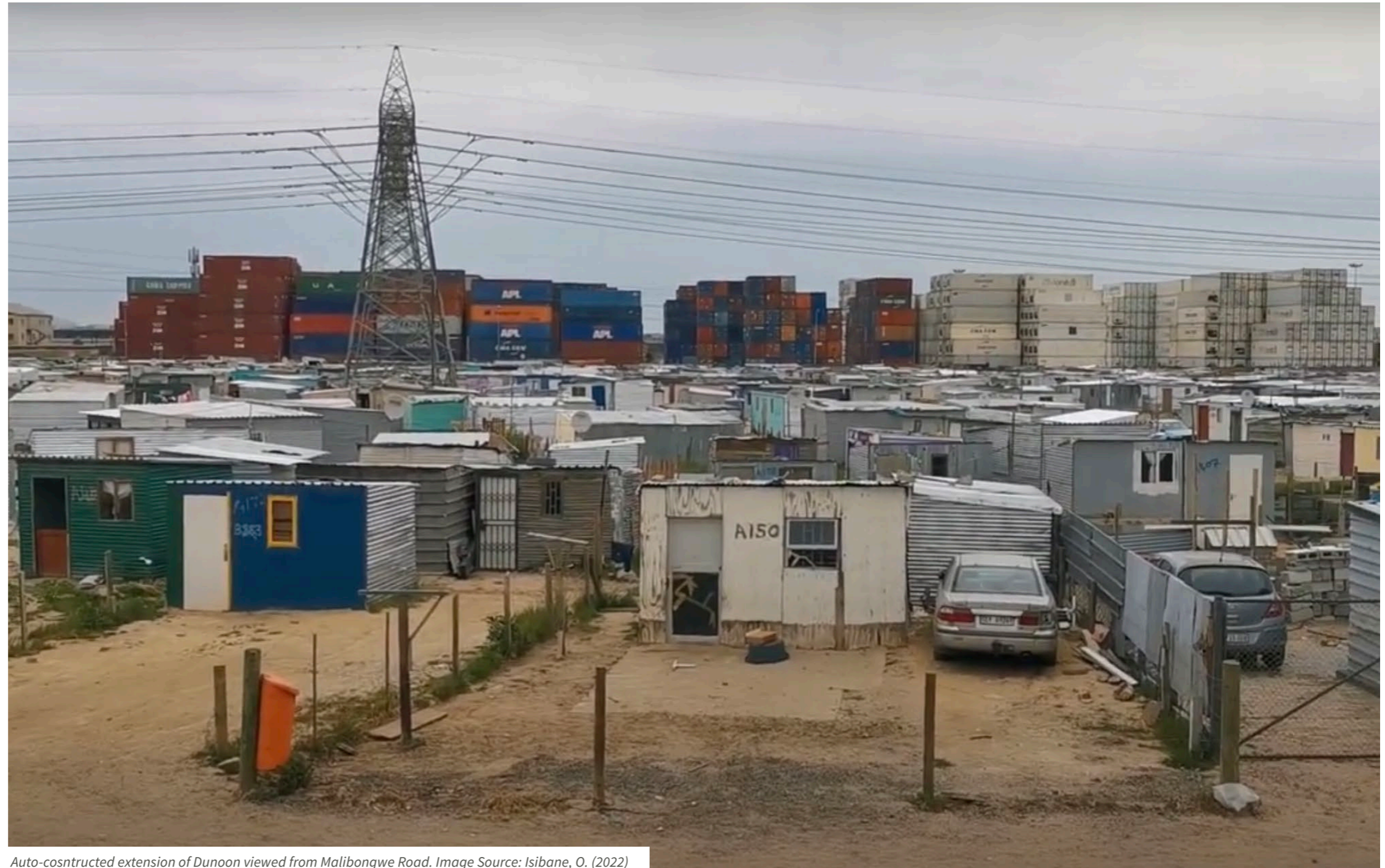
Research Question

(as complex)

Within the ever-shifting neighbourhood extents, Dunoon's internal urban fabric is one that has been built, upgraded and changed over time. The urban form rests on an intersection of planned urban shaping and unplanned individually driven auto-extension and upgrading. These individual processes (Bayat, 2013) create a continuous layering over and under various state controlled infrastructure. This has a numerous ever-limiting impact on the state's ability to access the most vulnerable parts of Dunoon. This produces constant tension and shifting vulnerabilities across the neighbourhood. As individuals and families compete and create space derived from survival needs, so a limited network of resources is stretched to and beyond its limit.

Returning to Jaglin (2014), it is important to note that her paper does not disregard the conventional service delivery model entirely. Her analysis acknowledges the fact that these models hold space well in certain contexts. However, where gaps exist within this model in other contexts, she poses a new system 'add-ons' that could help bridge these gaps. What is important to explore, however, is their condition. What do they look like spatially, socially, economically and politically? What is the relationship between these different 'realms and their impact on each other?

Dunoon, as a neighbourhood, cries for intervention to alleviate these complex realities that arise. But in order to properly address these various conditions, it is important to investigate: What are the spatial implications of these individually driven neighbourhood-making processes on the spaces of collective occupation in Dunoon? Then following that, how can urban design intervention reimagine the way in which state and user interact in complex urban environments to allow for safe public realms and equitable service provision and conditions within these diverse urban realities.



Auto-constructed extension of Dunoon viewed from Malibongwe Road. Image Source: Isibane, O. (2022)



A LIVELY DUNOON

collage representation of Dunoon on a Saturday morning.
Authors own images (2024), Google Maps Street View
(2024)

“THESE REALITIES CAN BE EXPLORED THROUGH”

Themes of Investigation

Initially, with the project interest driven by my own experience through movement past Dunoon, the research was focused most prominently on the concept of access through mobility. The hypothesis, intention and direction was one that looked at ‘carrying’ people within and out of Dunoon in daily commuting journeys.

The methods for investigation were derived from key questions that began to arise as the work encountered topics and discourse surrounding mobility and access and the spatial unfolding of these in Dunoon. Drawing inspiration from the essay of Bell Hooks (1997), the methods began first ‘outside’ the home, focusing on the journey to and destination of the workplace. The methods that followed then shifted along their own passage to the ‘homeplace’ of the study landing in experience and lived reality within Dunoon. These methods of investigation were explored through their own progression as a journey with the intention to hold the entirety of the investigation grounded as both a sequence of scaled exploration and layering of systems and infrastructural experiences. The questions and their derived methods were the following:

WHERE ARE PEOPLE TRAVELLING TO IN CAPE TOWN ON A DAILY BASIS?

The method included monitoring several key routes in the greater Cape Town Metropolitan. The routes were derived from Dewar and Todeschini (2004a) in their work *Rethinking urban transport after modernism: Lessons from South Africa where they mapped Cape Town urban fabric development from 1904 to 2000*. The aim with this method was to connect the focus area of Dunoon to the larger Cape Town metropolitan by identifying major economic centres and routes.

WHO ARE THE DAILY COMMUTERS OF CAPE TOWN?

The method used non-participant storytelling. The aim with this method was to use storytelling to concentrate the diverse daily transport experiences and draw on the social aspects related to access and mobility in and surrounding Dunoon.

WHAT, WHERE, WHEN, HOW AND WHY DUNOON?

This method included desktop study and site-drives through Dunoon for conventional and social mapping purposes. The aim with this method was threefold: (1) explore street as public space conditions as inspired by Dewar and Todeschini (2004a) (2) explore Dunoon public transport infrastructure (3) identify systems that relate to each other in operation inspired by both Larkin (2013) & Hanyurwumutima, L. K., & Gumede, S. (2021). in acknowledging that mobility systems cannot operate alone or without key unseen systems and elements.

WHAT IS TRAVELLING LIKE FOR DAILY COMMUTERS IN CAPE TOWN?

The method was a self-as-participant and experiential approach, using alternative means of transport that extended beyond private vehicular transport. The aim with this method was to encourage an embodied experience to enhance understanding relating to time, travel safety, financial concerns and travel availability and allude to key areas relating to travel that form part of the everyday commuting experience that are perhaps not implicitly known. (Teffo, M., Earl, A., & Zuidgeest, M., 2019)

WHAT DO RESIDENTS OF DUNOON HAVE TO SAY ABOUT THEIR TRANSPORTATION EXPERIENCES?

This method proposed a combination of desktop research and semi-structured interviews with the aim to confirm my understanding from within Dunoon, holding ‘external findings’ accountable to ‘internal checkpoints’.

However, my investigations constantly revealed a deeper challenge relating to access, over and above mobility alone driven by the question of travel conditions within the confines of the neighbourhood. While safety and accessibility in terms of travel choice, availability and cost came into play for mobility, they more prominently highlighted other realms of access requiring the same attention. Safety, choice, availability and cost revealed key challenges to be dealt with across a series of layers of understanding Dunoon. These included: scales of access, scales of infrastructure and scales of recognition. The collection of these extends beyond mobility out of Dunoon but look at mobility conditions and quality of life within Dunoon. It is with this that research truly began to accept guidance from works of Ewing and Krause (2021) and Hanyurwumutima and Gumede (2021) that push for layered consideration of the human experience that never sits compartmentalized and isolated.

... access ...

Crossing neighbourhoods, or embedded within a settlement, the issue of access is questioned: “What do top-down planning practices leave for spaces that are not planned for? What relationship does that create between settlement areas? What degree of access is granted to residents of the (un)planned settlement?”

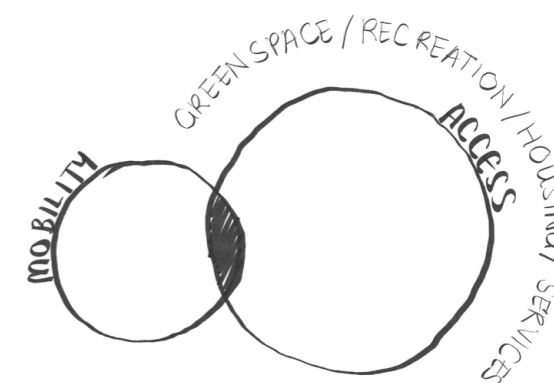
... recognition ...

Within and running to the extents of the neighbourhood’s borders, research into recognition explored the comparative spatial and consequential status of spaces that the state plans for and recognizes versus spaces that have been claimed by individual efforts. The exploration also questioned then how more planned areas interact with ‘less planned’ areas?

... infrastructure ...

As the final layer of exploration scales of infrastructure queries how state and user operate separately in relation to the provision and use of infrastructure? What are the spatial realities of infrastructure that extend different levels of vulnerability to the user?

The exploration of these elements across several scales enabled a deeper understanding that spans human experience to system conditions. Through this approach, the research looked at how can these urban challenges be addressed in context specific and sensitive ways to make proposals for better negotiation within and between different urban types and shifting forms.

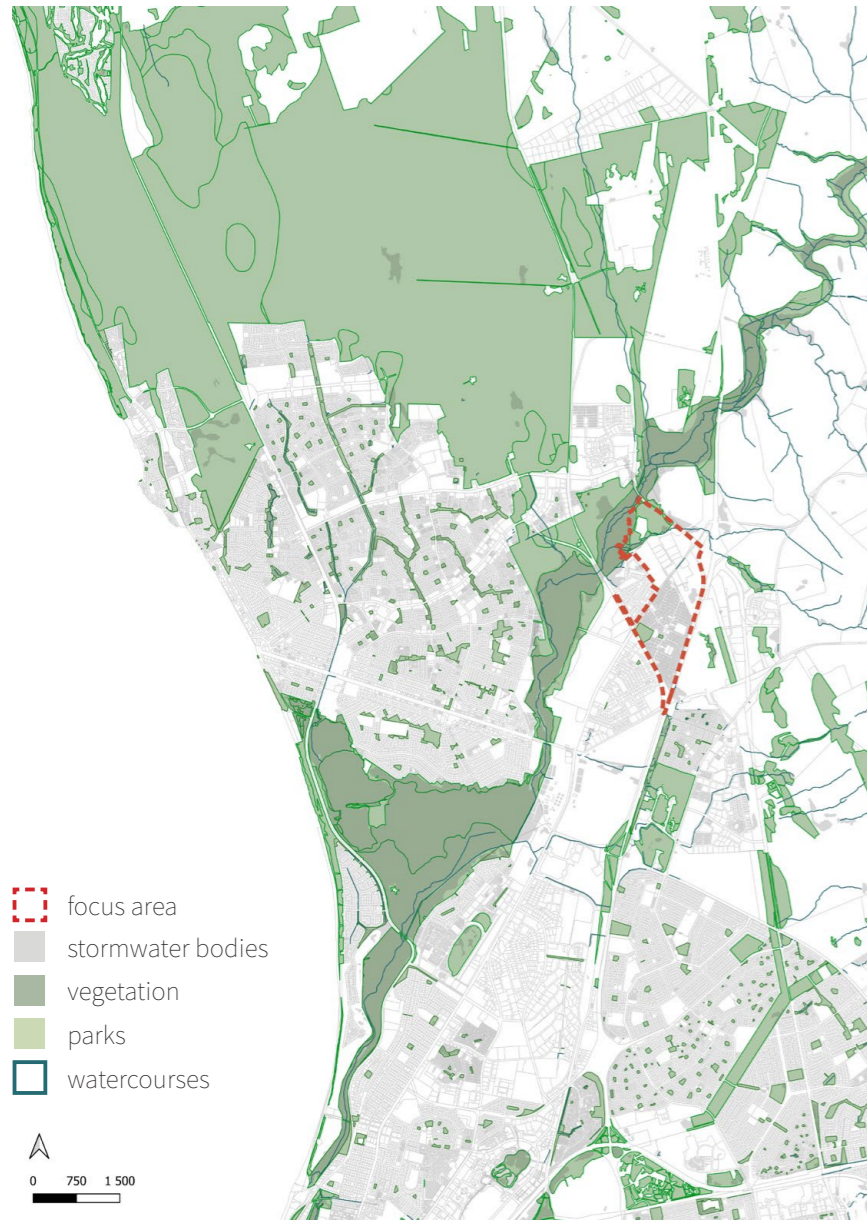


Beginning with access and looking to answer what top-down planning practices leave for spaces that are not planned for and what relationship that creates between settlement areas, the research explored access using the first steps to layers of urban structure as explored by Dewar and Todeschini (2004a, p. 6 Figure 1.1) which hints at the top-down approach to the creation of cities.

“SCALES OF ACCESS,”

Analysis & Findings

(isolated)



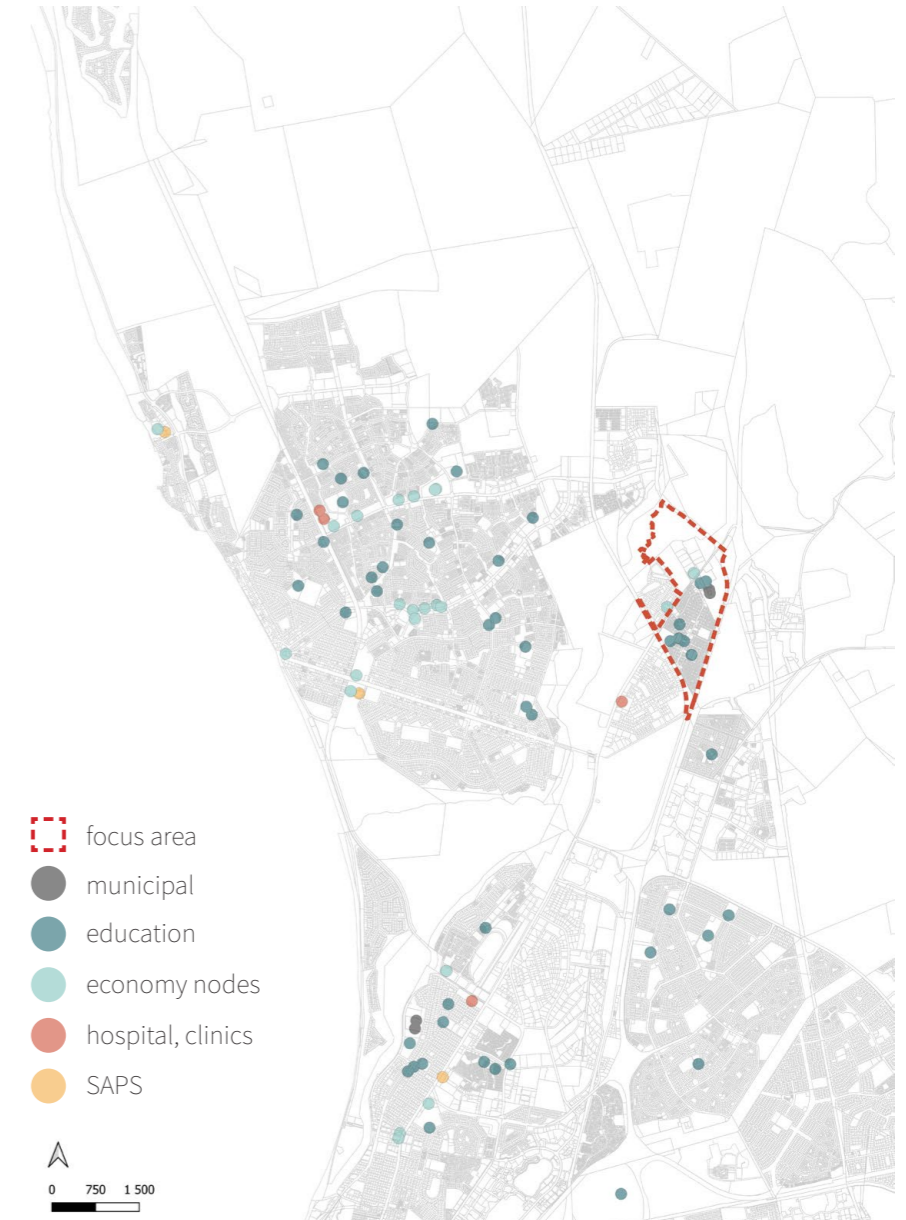
NATURAL SITES & PARKS

The surrounding neighbourhoods to Dunoon show positive balanced interaction with the natural environment while the focus area holds limited to no celebrated open green spaces for recreation that is safe and maintained echoing work by Venter et al. (2020) on Green Apartheid.



MOVEMENT

Bordered by the N7 and divided by Potsdam, surrounding road classification presents challenges as people occupy spaces along and under movement routes creating safety concerns. Potsdam also separates Doornbach and Dunoon despite their reliance on each other.



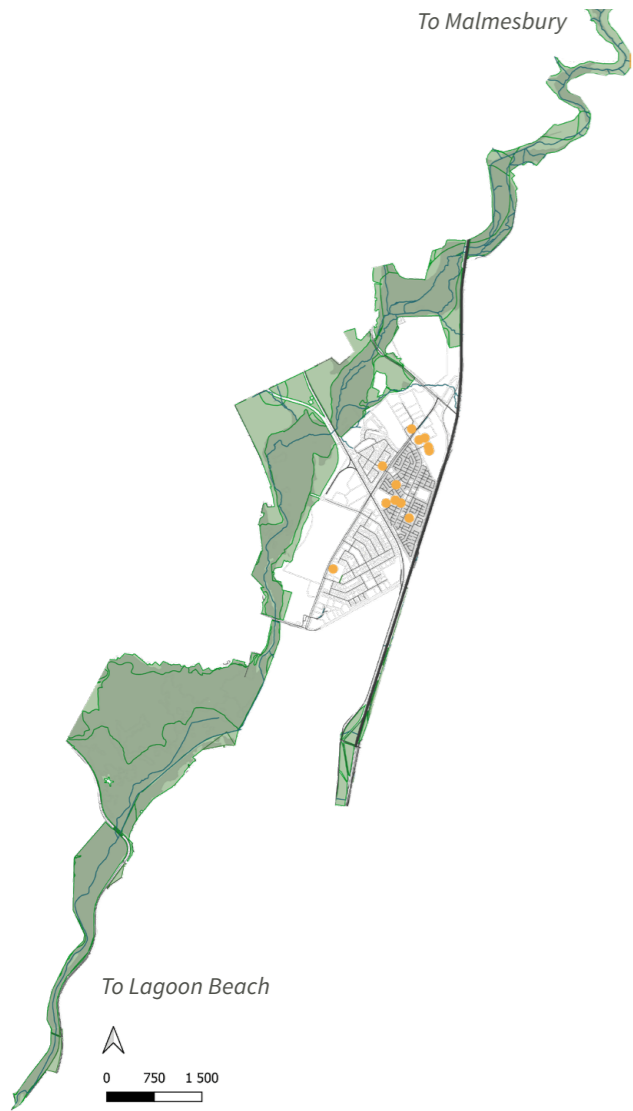
PUBLIC, HEALTH & ECONOMIC FACILITIES

Surrounding neighbourhoods have opportunity for interconnection whereas the focus area demonstrates clustered, inwardly focused facilities to the planned side of Dunoon, showing no visible connection to other surrounding neighbourhoods. Limited access within. Additionally - no internal police or clinic access.

“SCALES OF ACCESS,”

Analysis & Findings

(limited)



LIMITED INTERACTION AVAILABLE

The surrounding movement routes, wetland and distribution of facilities relating to the public good maintain a disconnect between the focus area and surrounding neighbourhoods. This makes as case to explore access within the confines of the focus area and further investigate the Doornbach / Dunoon relationship relating to elements of access



ISOLATED



PRESSURED



LOCALISED ECONOMY

Isolated & claimed

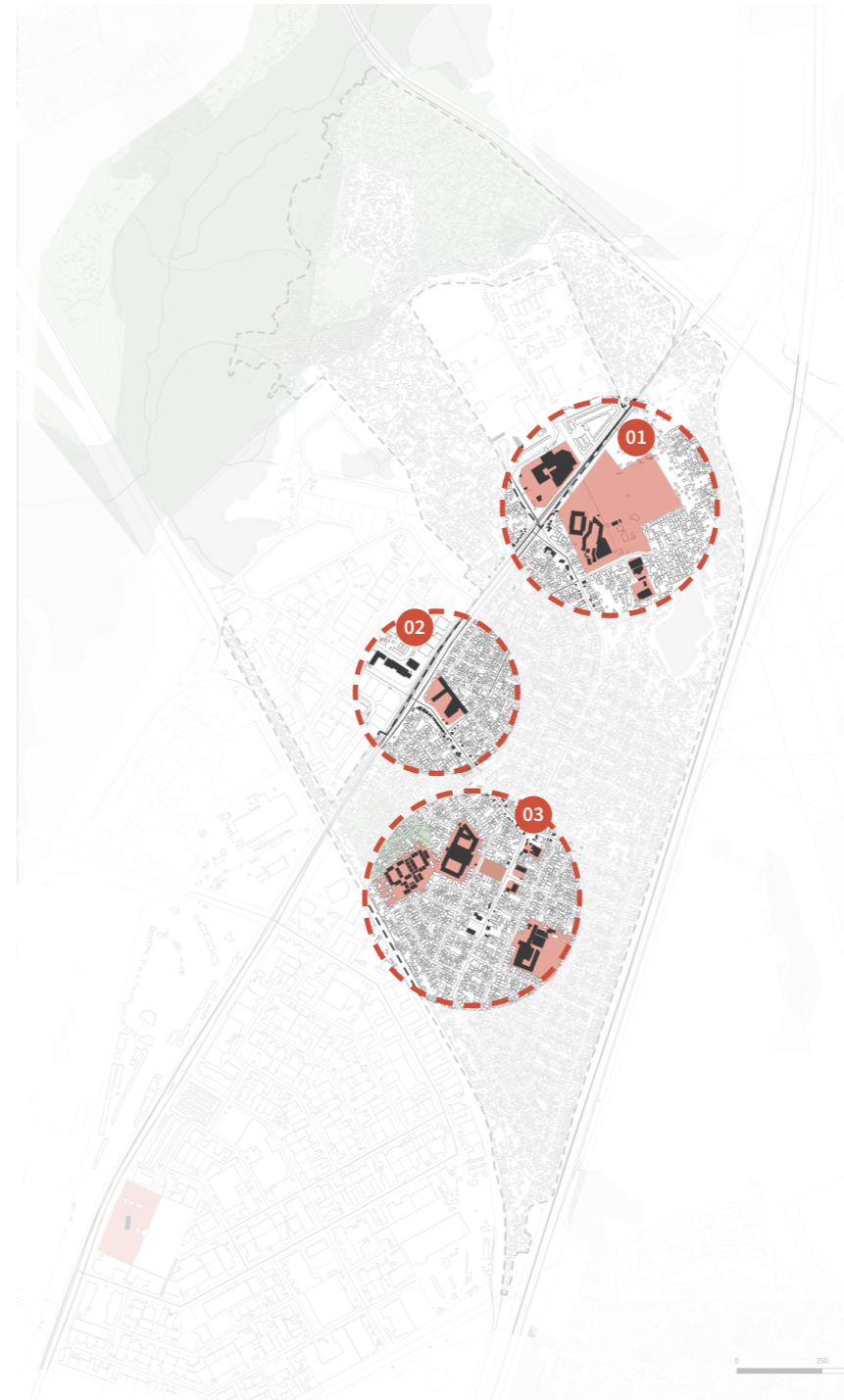
The focus area continues to experience a detached urban structure as large scale natural and manmade elements isolate it from surrounding residential areas. What then becomes crucial is the inward relationship between doornbach and dunoon which shows, despite their formal distinction an incredibly sensitively inter-reliant relationship.

Dependent & pressured

Within the extents of the aforementioned buffers and boundaries, open land is rapidly and increasingly occupied, eliminating access to natural open spaces and planned park areas (city of cape town, 2019, p. 55). Dunoon, as the planned township, now sits pressured by its auto-constructed extensions for facility access, economy, parks and recreational spaces highlighting an increasing need intervention.

Economy

Three major activity nodes are found within Dunoon. It is surrounding and along these that the most active economy is found. A combination of official stalls, house shops, temporary stalls make for vibrant activity streets.



NODE 01:

The Dunoon Learning & Innovation node which includes the work of Wolff Architects (2007) for the secondary school and the City of Cape Town (2019) for the library, ECD and sports grounds. It is the primary node recognised within Dunoon. With the library recognised as the 'extended living room', the precinct offers grades of social and learning opportunity as an extension of the homes responsibility (City of Cape Town, 2019).

NODE 02

The public transport interchange was implemented in 2021 by the City of Cape Town along with design work by Meyer & Associates and was created to extend beyond the singular function of a taxi rank. It has office space along the first floor and is home to several (im) permanent traders along its edge. The forecourt facing onto Potsdam Road also offers space for community activity like a dance performance as observed during one of my site visits. (City of Cape Town, 2021)

NODE 3

Though a series of disconnected facilities, the learning precinct offers great opportunities to youth and adult alike. With the schools located close to a park, community halls and churches, there is potential for a secondary learning and innovation precinct within the Dunoon area that caters to a wider variety of needs.

“SCALES OF ACCESS,”

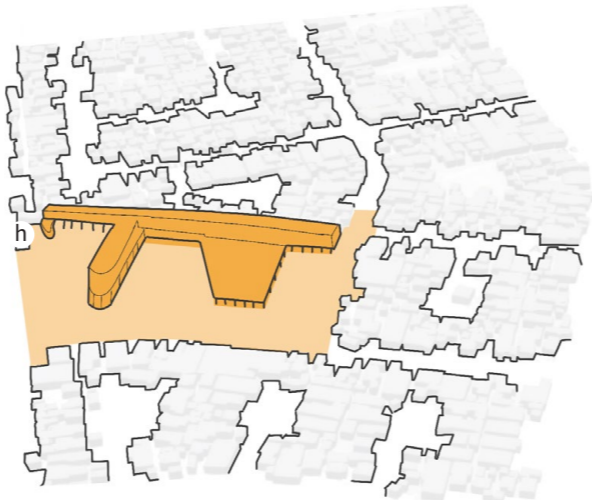
Analysis & Findings

(concentrated)



NODE 01

The Dunoon Learning & Innovation Precinct
 (a) Inkwenkwezi Secondary School (b) Sports Centre (c) Library (d) ECD centre (e) Sanitation Blocks (f) Ward Councilors office (g) community



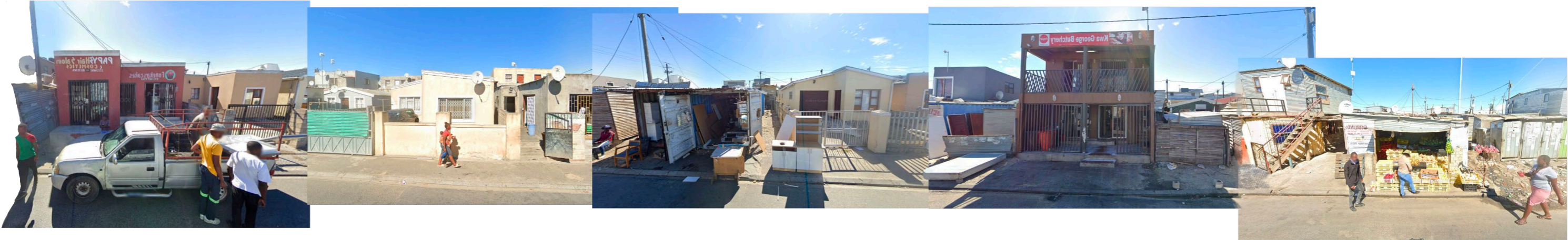
NODE 02

Transport Interchange
 (h) taxi rank



NODE 03

Learning Precinct
 (i) Silverleaf Primary School (j) Sophakama Primary School (k) Basketball Court (l) Anglican Church (m) Methodist church (n) community development centre (o) resource centre (p) Dunoon primary school



Images extracted from Google Street View _ Google. (2024). In. Google Maps.

ATTACHED ECONOMY

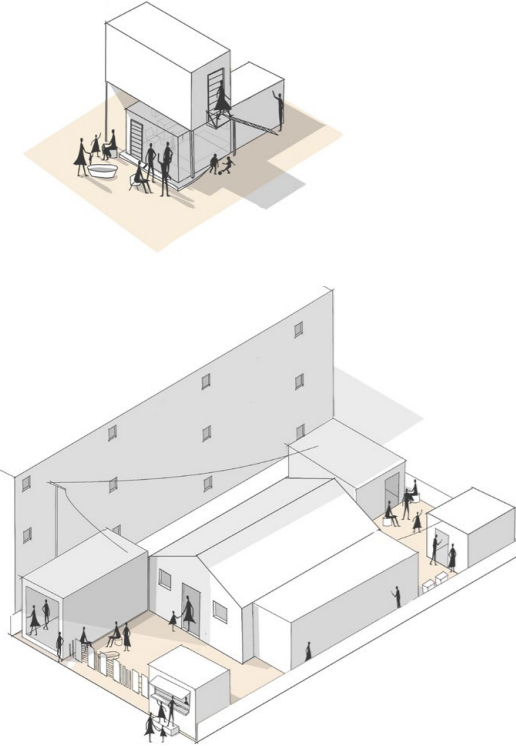
The economy surrounding these nodes varies from built as an extension of the house, a built structure outside the house, to a stall that is set up and taken down daily. These businesses offer, during the day, significant safety through passive surveillance and a lively street culture as the public realm. However, most businesses close around 7pm leaving streets more vulnerable at night.

“SCALES OF RECOGNITION”

Analysis & Findings

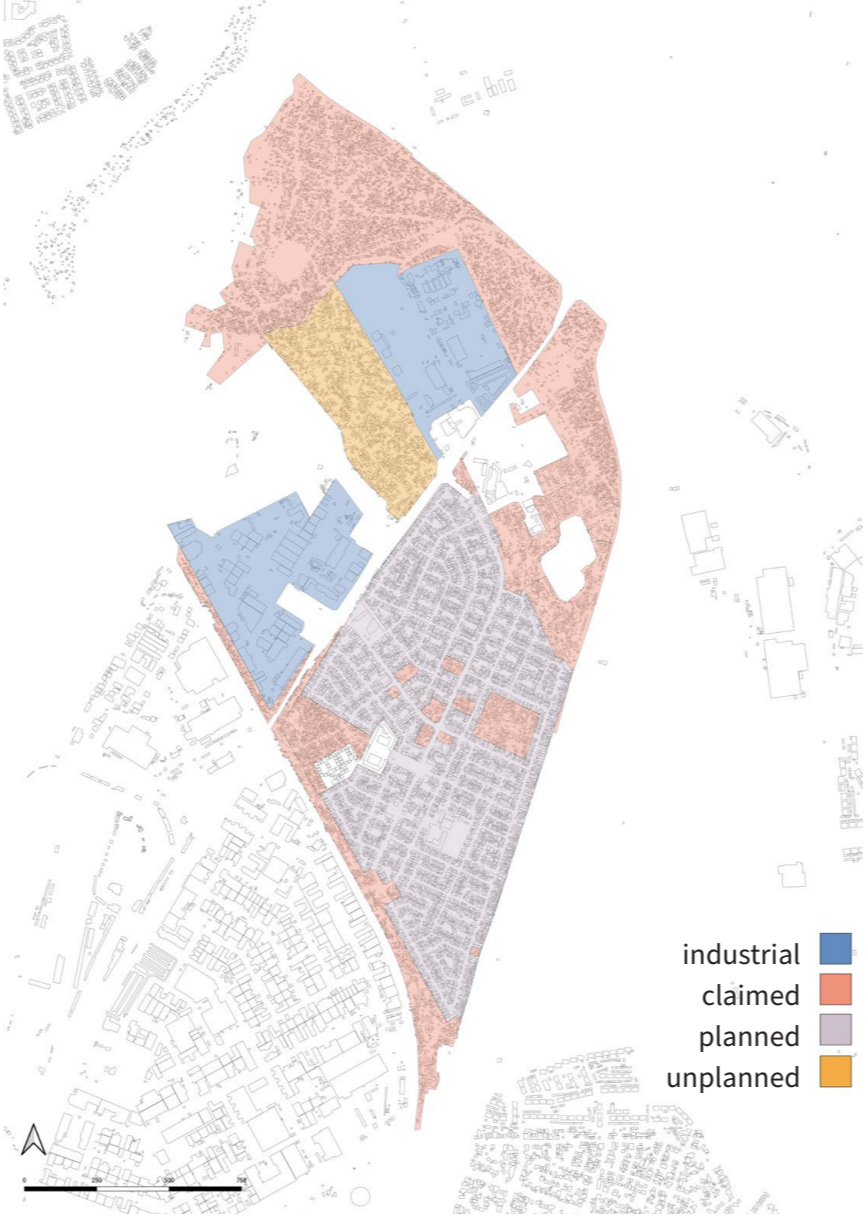
(complex)

Exploring recognition means looking into the relationship between users and state through the writing of Roy (2011). Looking to answer, “what happens when the state considers something illegal”, we see limitations on service provision and recognition. Furthermore, here the work explores Dunoon’s relationship to its directly adjacent neighbours by way of understanding the condition of existence.



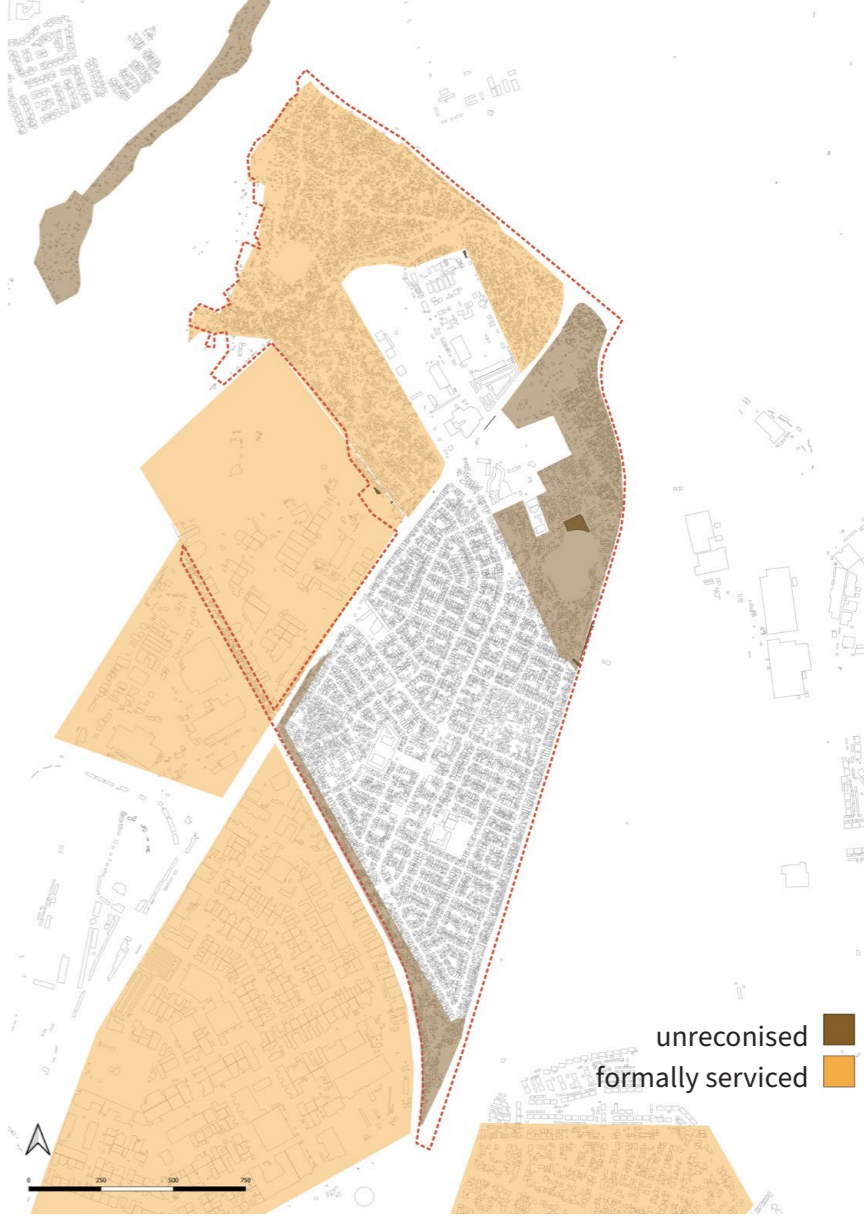
CONDITIONS OF EXISTENCE

Rapid urban growth in the focus area has offered up alternative built forms through self-building practices and economies of various types to accommodate both growth and survival through the increasing density within the focus area. This creates complex forms of existence and therefore recognition both externally and internally.



HOUSING LEGALITY

Planned Dunoon sits as legal in existence, though practices of illegality through backyard dwelling rentals complicate its relationship with the state. Auto-constructed extensions to the North and West (Doornbach) sit as illegal on occupied land, therefore are not recognized for permanent and long-term servicing solutions.



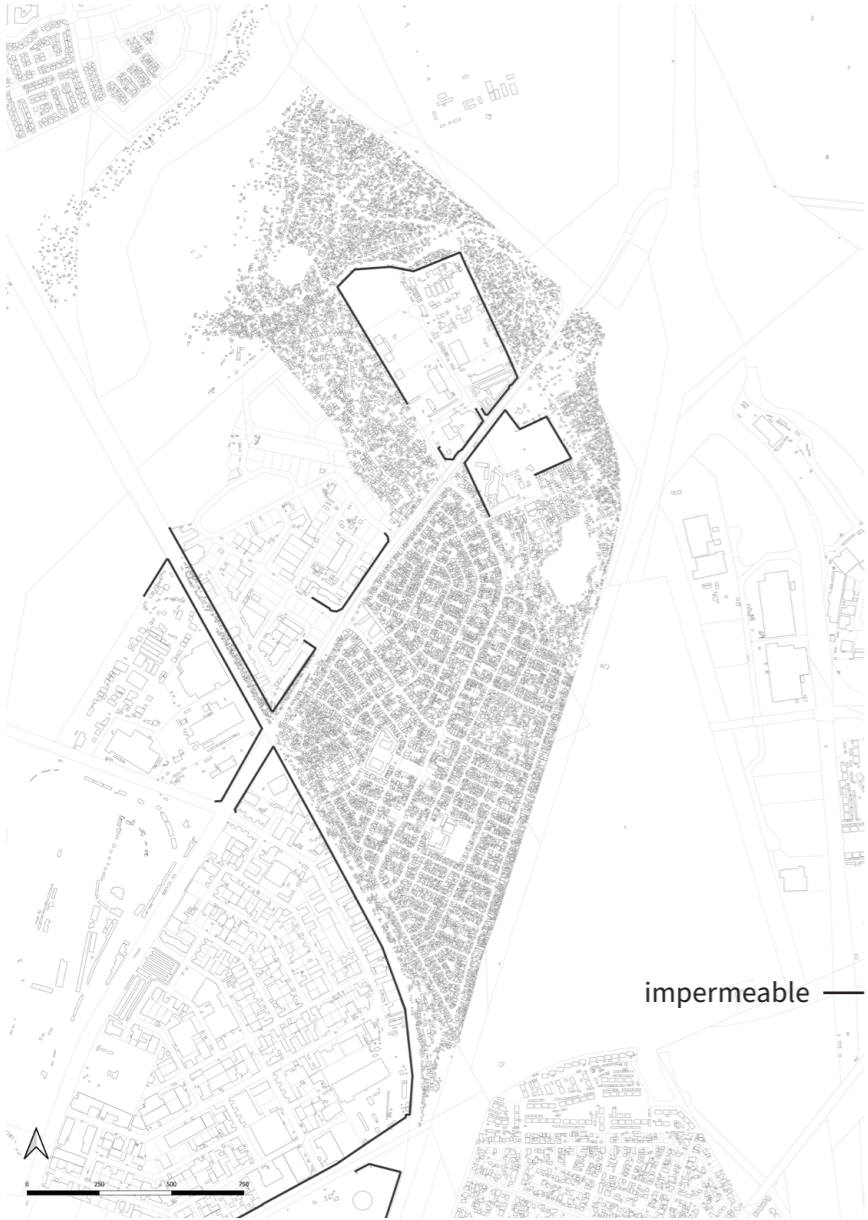
SOLID WASTE REMOVAL

Acknowledging the increased density in Dunoon waste collection now runs Mondays, Wednesdays and Fridays within planned Dunoon (City of Cape Town, 2024). However, waste collection is not recognized as far as the extended parts of Dunoon and receive a different treatment plan. (City of Cape Town, 2021a; Snaddon et al., 2019)

“SCALES OF RECOGNITION”

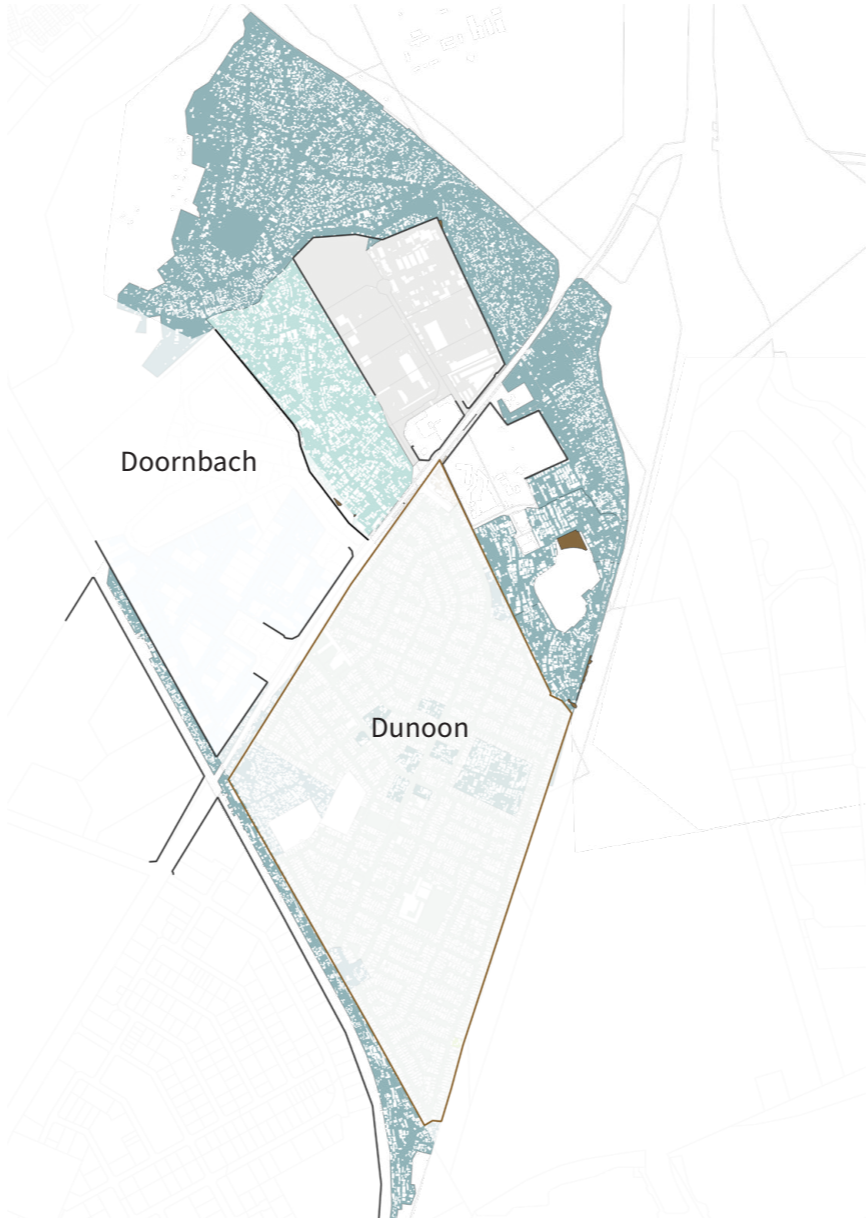
Analysis & Findings

(ignored)



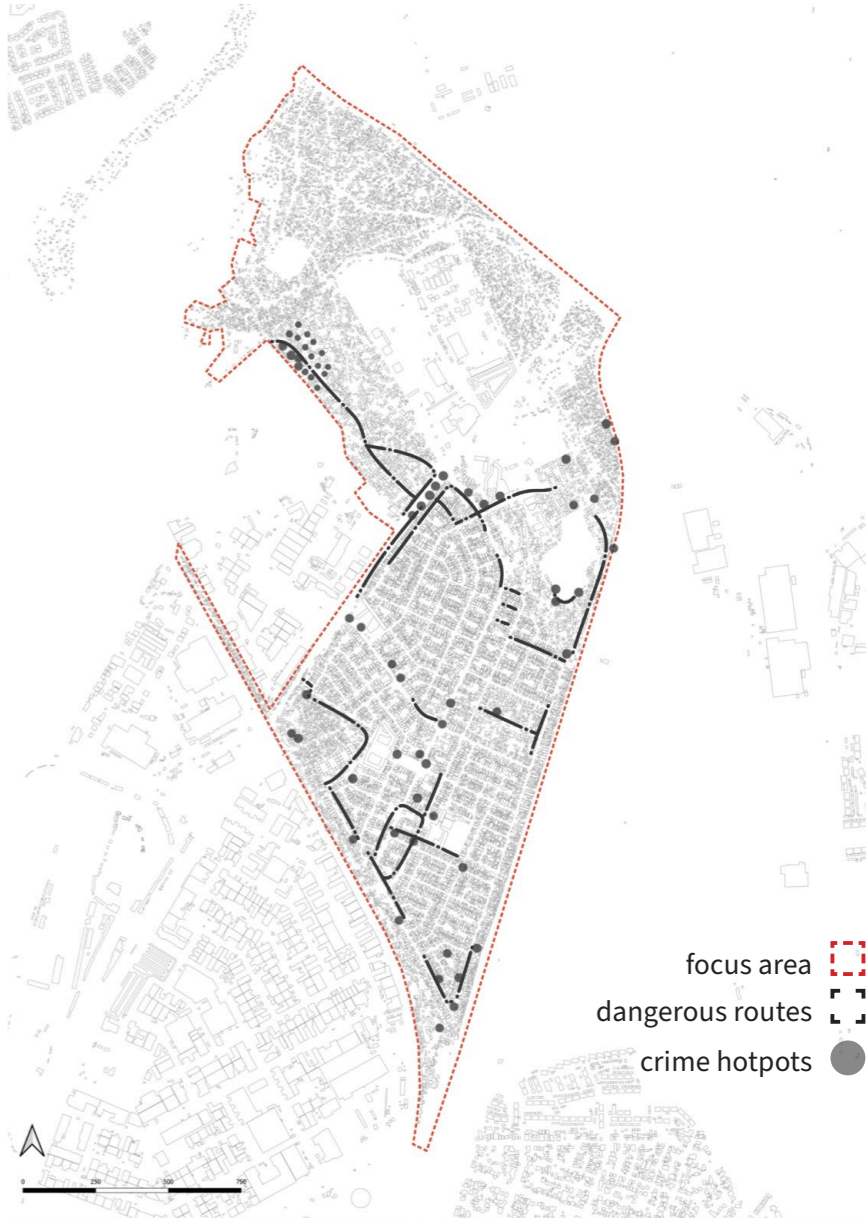
EDGES

Though well-located in terms of labour job opportunities, public transport and a progressing urban edge, Dunoon still sits as excluded by its immediate neighbours. Industrial and commercial areas are walled with limited permeability towards Dunoon creating hostile travel and interaction conditions between Dunoon and these areas.



DEPENDENT

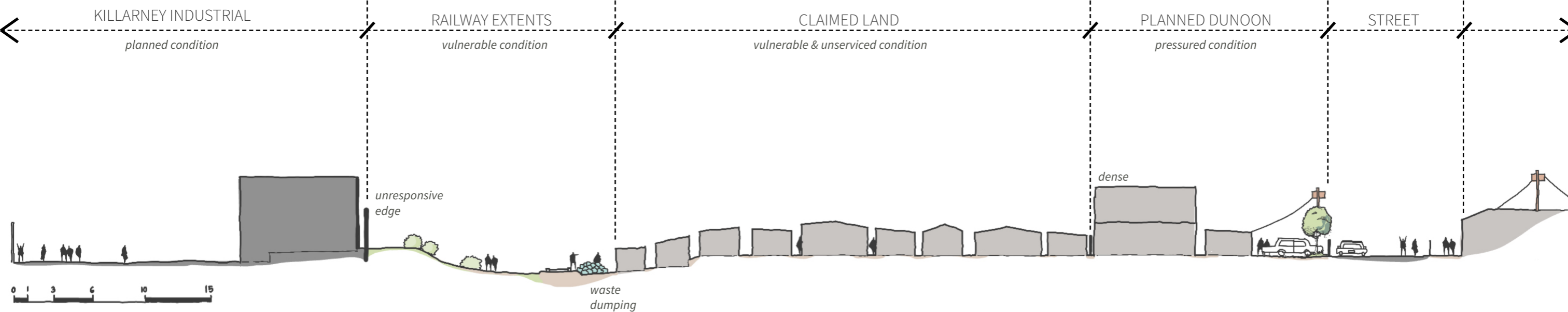
The combination of forms of recognition in Dunoon has created an increasingly interlinked relationship between the auto-constructed extensions of Dunoon and the planned portion. Additionally, with illegal dumping practices to make up for lack of sufficient recognition, the natural environment suffers from these 'disregarding' dependencies.



VULNERABLE

Due to complexities relating to recognition and legality, vulnerable spaces and routes emerge (City of Cape Town, 2019, p. 56) most prominently in spaces or routes that transverse multiple realities and conditions of recognition and legality. This makes transitional spaces between planned and unplanned, claimed and occupied very interesting spaces for further exploration. Information extracted from City of Cape Town and re-represented by author.

“SCALES OF RECOGNITION”



SHIFTING SCALES OF RECOGNITION
 Conditions of existence and various forms of recognition change within a 100m distance.



Authors own image
WASTE DUMPING
 Unoccupied space is quickly claimed for dumping excess solid waste when service provision is insufficient.



Image Source: Isibane, O.
WATER DRAINAGE
 Stormwater off the N7 falls into the Eastern edge Dunoon. This has led to waste dumping and polluted water space.



Image Source: Isibane, O.
WATER PROVISION
 Water trucks provide clean water on a weekly basis to unplanned portions of Dunoon.

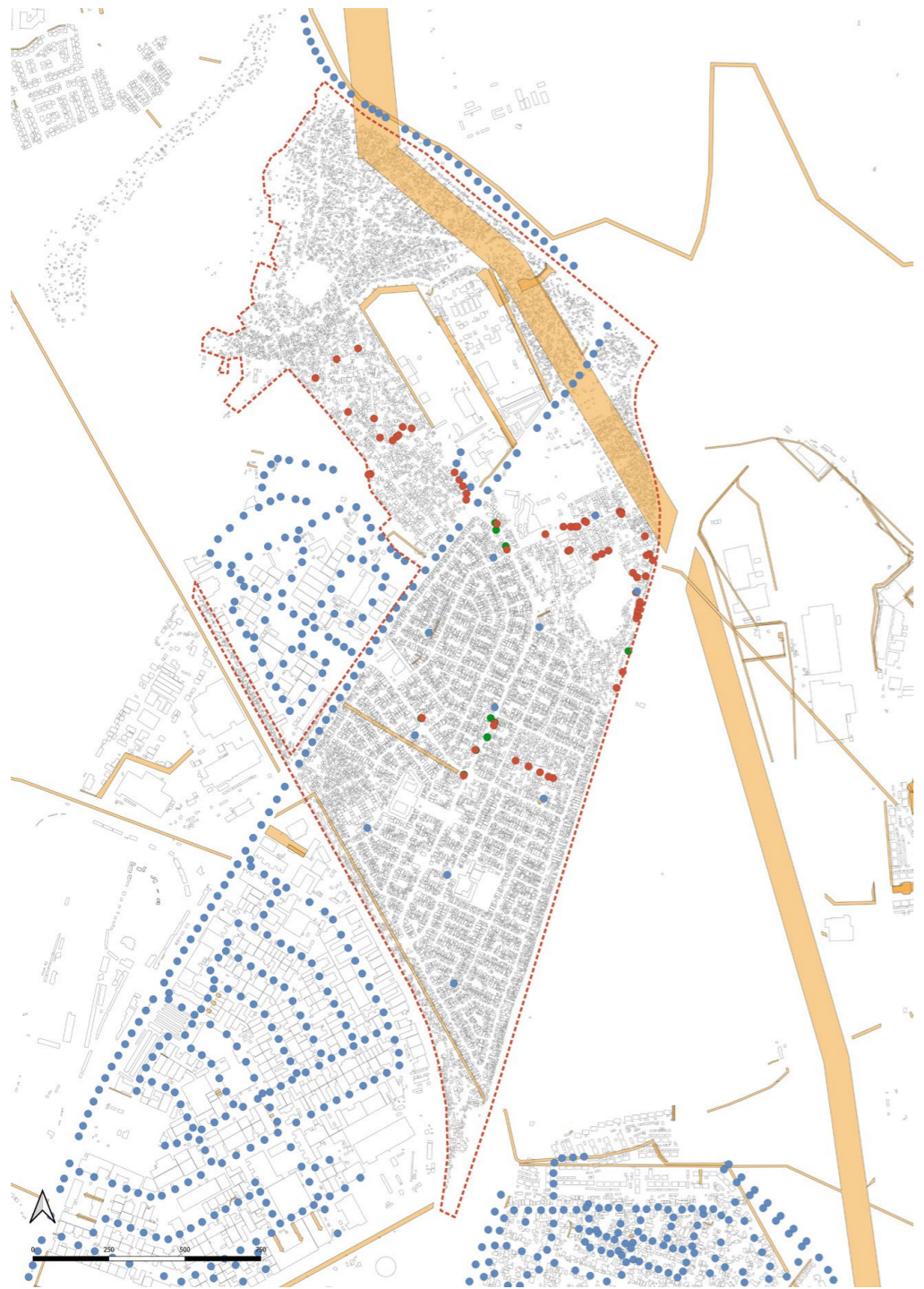


Authors own image
PLANNED DUNOON PLOT
 The above image shows the original structure relating to a planned Dunoon which was a single story 6mx4m structure on a 15mx7.5m plot.

“AND SCALES OF INFRASTRUCTURE”

Analysis & Findings

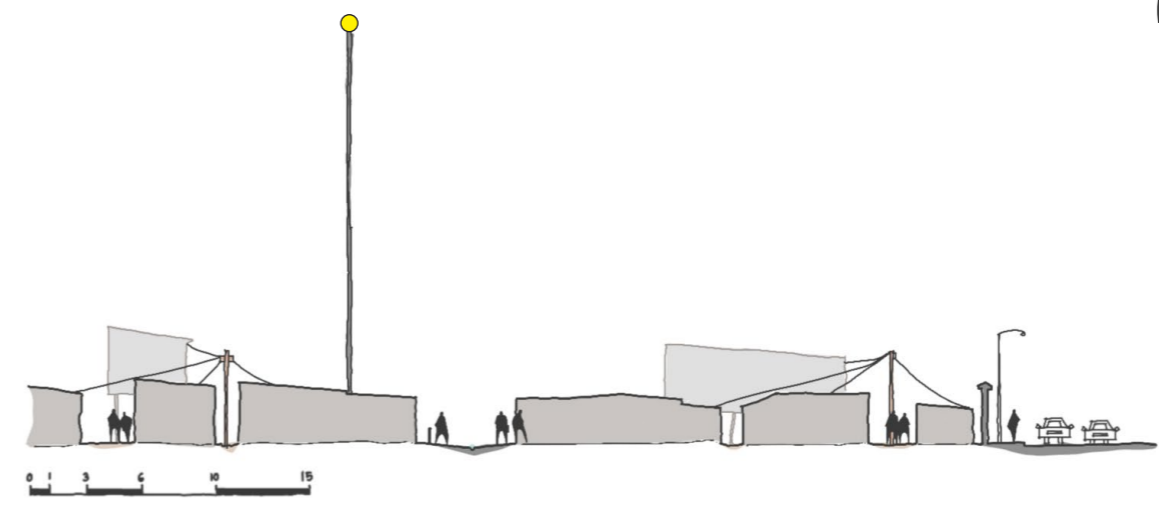
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DISONNECTED

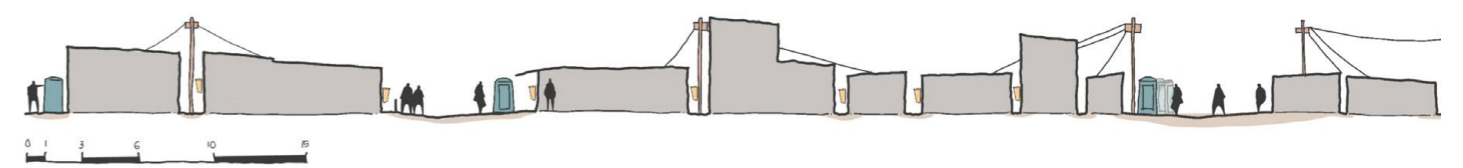
The focus areas sits disconnected from full service provision with major routes and buffers housing large scale service infrastructure while within the residential portion of the neighbourhoods received small-scale, limited and temporary forms of service delivery that leaves many areas vulnerable to unscrupulous activity spanning the day and night in different manners.

- focus area
- state street lighting
- sanitation blocks
- water points
- servitudes



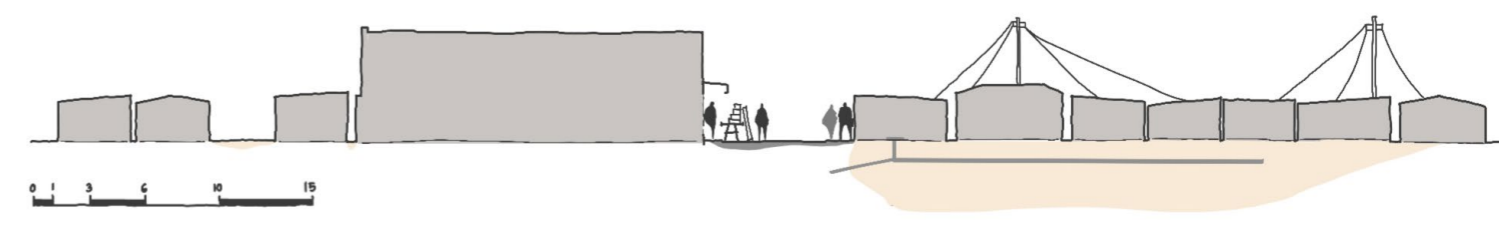
SERVICES AT THE INCORRECT SCALE

Echoing the sentiments of Stephanie Briers (2021), the scale of service provision – lighting in particular – often remains entirely disproportionate to its user scale or population. High lights maintain the presence of shadows between dwellings leaving movement before sunrise and after dark vulnerable to higher crime exposure.



SERVICE PROVISION IN AUTO-CONSTRUCTED DOORBACH

Service provision in the auto-constructed and claimed portions of the focus area remain 'temporary' in nature despite a nearly 30-year existence. Electricity and sanitation provision are 'stop-gap' solutions that in effect increase vulnerability within the area with high crime rates and unsafety associated with these temporary service facilities.



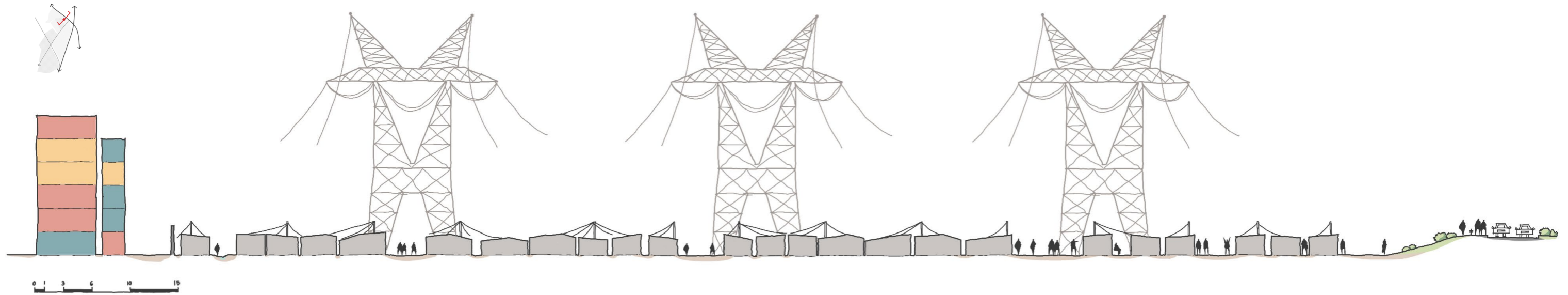
BUILDING OVER SERVITUDES

Auto-construction over state servitudes has led to blocked, unreachable pipes and flooding in winter particularly (Hill-Lewis, 2024). This has a ripple effect on neighbourhood infrastructure and living conditions which causes tension between the planned-unplanned relationships in the area.

“AND SCALES OF INFRASTRUCTURE”

(limited)

Analysis & Findings



BUILDING UNDER SERVITUDES

Auto-construction under the powerlines on the northern edge of Dunoon expose high numbers of residents to highly vulnerable conditions in case of collapse due to adverse weather or part theft. Here the vulnerability associated with self-constructed homes and neighbourhoods come into play as certain safety risks are disregarded in favour immediate survival concerns.

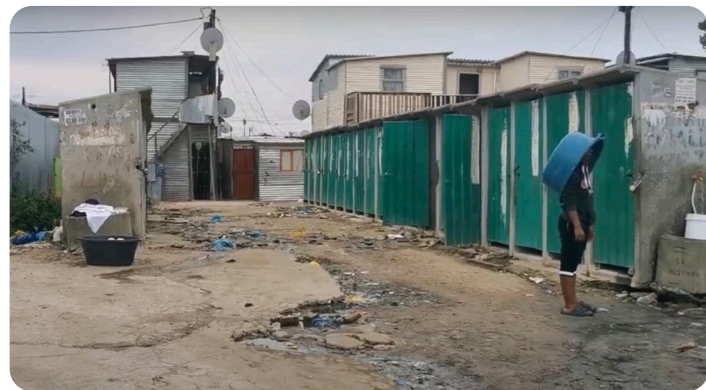


Image Source: Isibane, O.



Authors own image



Image Source: Isibane, O.



Image Source: Isibane, O.

SANITATION

Sanitation blocks are situated with little privacy offering, family management for mothers with children, lighting for night time safety and water drainage around the blocks. Locks to demarcate a cubicle for a set of families are easily broken and toilets are suspect to being filled with wet waste from cooking in the event of no proper waste disposal available (Cele & Pharoah, 2020; Zweig, 2020)

STORMWATER

In Doornbach (above), angled paving or road channels are used to collect water. In Dunoon, existing stormwater is at risk as residents build over servitudes causing winter flooding (Hill-Lewis, 2024).

WATER POINT

Communal water points are sometimes situated in ‘alleyways’ that offer no safety lighting. Water points are sometimes broken, proper drainage isn’t provided, and water runs into the street.

REVEALING A NEED FOR NEIGHBOURHOOD STRUCTURING”

Research Findings

What revealed itself through the research exploration was the often-independent operation of state and user to achieve a set of goals in a set of areas. The various conditions associated with the scales of access, infrastructure and recognition show ranging levels of vulnerability across Dunoon. The consistent element across all practices was the notion of quiet encroachment relating to a ‘non-collective’ set of sustained actions by individual parties (Bayat, 2013). Across Dunoon, constant individual action in a number of fashions has produced a series of collective outcomes that have created several vulnerabilities in terms of ratio of population density to access to facilities, pressure on underground services and safety in auto-construction practices. Further vulnerability exists in the relationship these areas hold with the state. With most of Dunoon recognized as informal, the state is challenged to address numerous issues simultaneously in the face of continued rapid urban growth of the area. Some of these included tax income to tax expenditure in the area, the need to legalize ‘plots’ for service provision where dense settlement has already occurred and the care of existing areas that are increasingly burdened despite their ‘formal’ status.

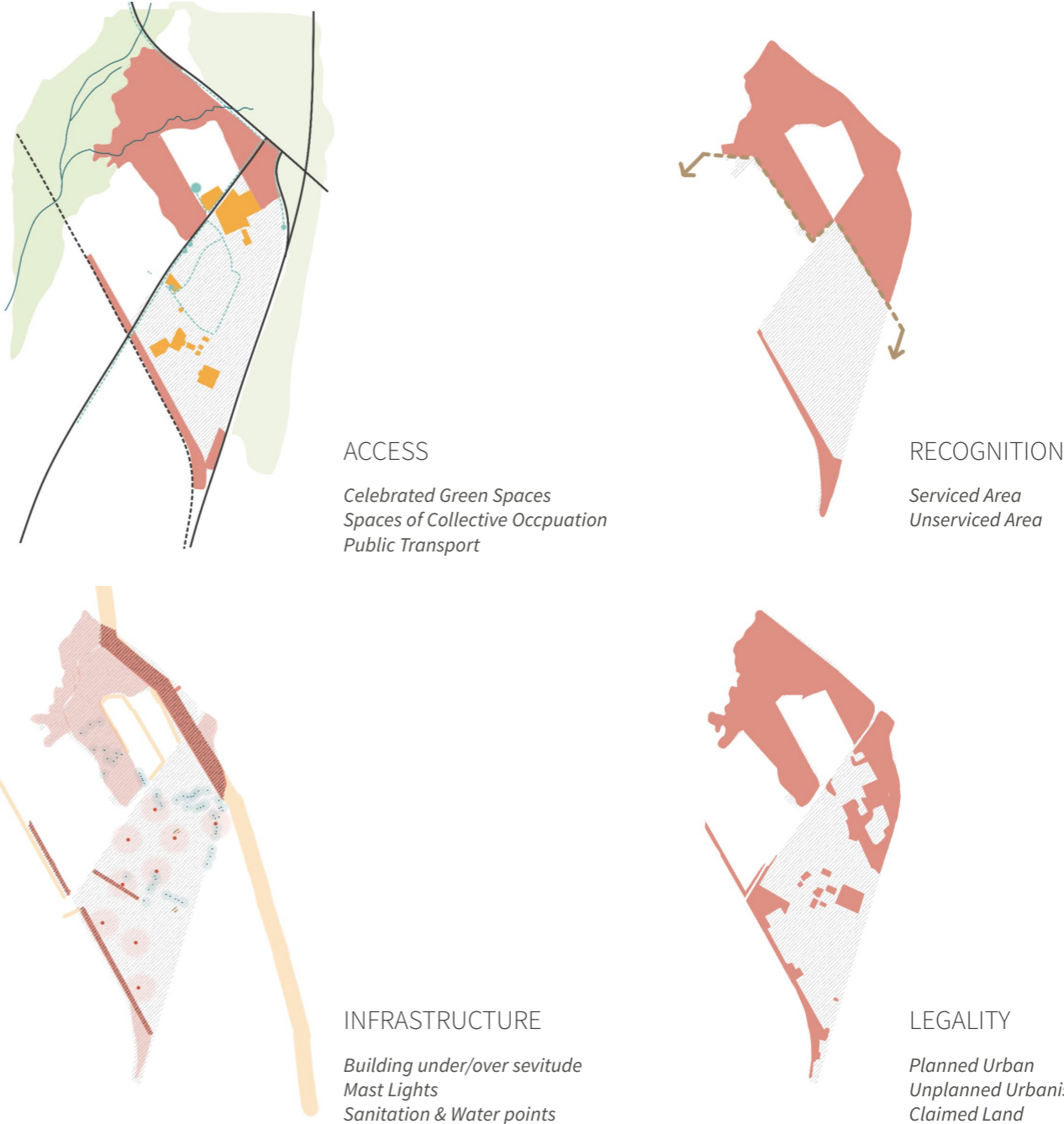
The constant individual actions of users and their collective vulnerability outcomes have resulted in limited areas of celebrated public space that act as relief from dense, intimate urban fabric conditions. Further vulnerability is increased by the range of residents in Dunoon where some hold a permanent status and others a migratory one which influences their outlook and perspectives regarding certain service practices. According to Cele and Pharoah (2020) in their paper that looked waste disposal practices in an informal settlement in Stellenbosch, there is a psychological attachment or

lack thereof to settlement areas which are often intended for job seeking and income generation only by various migratory groups. (Cele & Pharoah, 2020). When ‘home’ is seen as elsewhere, these detachments play a big role in individual mindset and treatment of space in Dunoon which often leads to the collective outcome of waste dumping, blocked sanitation services due to incorrect waste disposal and littering (Cele & Pharoah, 2020; Zweig, 2020).

On the other hand, the constant temporary relief action by the state increase vulnerability where temporary service provision is considered unsafe for residents at certain hours (sanitation blocks) or requires large distances to be traversed to access them (Dunoon Clinic).

The spatial implications of these uncoordinated individually driven neighbourhood-making processes is a dense, varying and often unstable urban character. It produces an incredibly vulnerable urban, not just regarding daily activity but one that is not resilient to various forms of disaster such as fires or flooding (City of Cape Town, 2019; Wang et al., 2021). A symptom, then, of these uncoordinated collectives is safety and vulnerability concerns for residents both in the private and public realm of Dunoon.

What is needed is positive, safe public space that cater to the limited-service provision needs but more than that, focus on stabilizing points within this collective urban. These spaces could then operate as entry points for both state and user negotiation and communication for hybrid urban upgrading projects. Through the incorporation of not only infrastructure, but layering, on the need for infrastructure, access and recognition through



CONSOLIDATION OF RESEARCH FINDINGS INTO DIAGRAMS THAT HIGHLIGHT MOST VULNERABLE SPACES.

REVEALING A NEED FOR NEIGHBOURHOOD STRUCTURING”

Research Findings

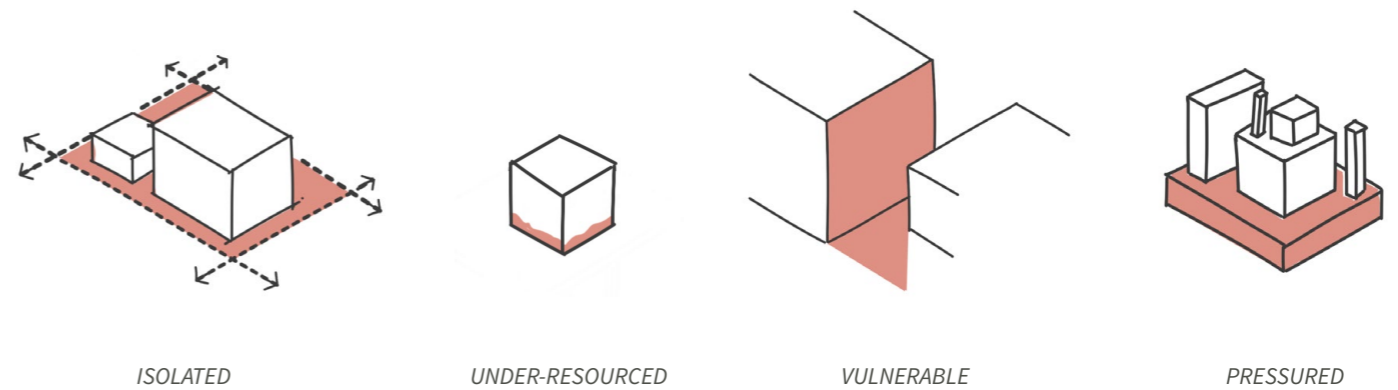
educational and social programs, successful spaces can be created as structuring elements for the focus area. Tapping into existing needs within the area as the primary focus point, these layers or partnerships begin to extend proposed spaces beyond single use to constant impactful multi-use. (Ewing & Krause, 2021)

Linking spaces within Dunoon and alleviating spaces of pressure by extending the concept of access across the entirety of the focus area could also begin to encourage safe, sustainable building practices that allow state to respond to the urbanisation appropriately because there is the opportunity for dialogue between the two parties. Then, in recognizing plans for the future extension, through the Blaauwberg District Plan, of the planned urban edge to include mixed use zoning, high density housing and more industrial development (City of Cape Town, 2023), there is opportunity to structure Dunoon’s growth to respond to the trajectory of the future.

Proposed and existing projects external to Dunoon offer great opportunity for partnership and collaboration that will ensure Dunoon residents have a stake in the future and agency over their developing neighbourhood. There projects include: the proposed Potsdam Sustainability Campus (Potsdam sustainability campus launch, 2023; Urban Sustainability Unit, 2020) which is a skills development and urban agricultural development site. Then the Potsdam Wastewater Treatment Works upgrading project which is taking place over the next few years (Odendaal, 2023) offers an opportunity to extend better capacity bulk services into Dunoon in the near future. And finally the new Rivergate CBD node which is currently underway (Urban Studio) offers the beginnings of the extended urban edge of Cape Town, where Dunoon sits, prime for inclusion.

By, internally, targeting issues relating to service provision and the public realm which currently create urban vulnerability and instability, the project can begin to offer bones to a rapid urban growth which still allows state access even to the most vulnerable periphery. Using these bones and joints, varied partnerships could begin to reshape the complex urban of Dunoon into a neighbourhood of safety and inclusion.

However, to achieve these ‘fix points’ for the beginnings of change, the acknowledgement of the complexity of Dunoon’s current existence needs to remain at the forefront of all proposals. For that reason, the design exploration begins with a precinct that spans across these varied existences. (1) capturing the dependence of Doornbach on Dunoon, the urban fabric on either side of the ‘train tracks’ speaks to the immediate difference and dependencies of Doornbach on Dunoon, (2) both sides experiences the ‘extension of the built towards their hinterlands’ (Roy, 2011) developing very different urban environments which further pressure the ‘core’ urban spaces, facilities and institutions and (3) the interaction with buffering elements on either side of the focus area create interesting points for the exploration of safety in self-constructed neighbourhoods - not just for the occupants but also for the natural environment and ‘buffer users’ of the N7 roadway.



CHALLENGES IDENTIFIED FROM THE RESEARCH THAT SEE DUNOON AS...



BEGINNINGS OF DESIGN PRINCIPLES THAT CATER TO THE IDENTIFIED CHALLENGES.

SETTING THE SCENE: THE DESIGN DEVELOPMENT



Conceptual exploration of design intent using the terms 'motion' and 'expansion' as action prompts. The design intention is to weave in proposals for intervention into the existing urban fabric, allowing the freedom to change itself over time. The orange thread, woven in, changes the character of the model, offering it new ways to move and react.

“USING THE PRECINCT SCALE”

Design Intention

(investigation area)



“AND AN UNDERSTANDING OF THE COMPLEX URBAN OF DUNOON,”

Design Intention

Acknowledging the need for neighbourhood structuring as a way of establishing safety and provision protocols across the varied realities in Dunoon, it is important to understand that there will be no ‘one-size-fits-all’, not just looking at the internal-external relationship but even within the neighbourhood. By exploring different sections within the precinct area (see figures to the right), it becomes clear that not every collective offers the same degree of intervention space or access for conventional service provision by the state. Additionally, the quality of life offered through living conditions varies across each collective.

Traditional planning practices and service provision models (Jaglin, 2014) attribute the hierarchy to the state-accessible and provided ‘routes’. This approach extends very real exclusionary, divisions and boundaries (and margins by extent) into space. To use the conventional lens of understanding would be to confine Dunoon within its bordering elements, refusing adjustment. In order to truly address the nuances across the context, the needs for different collective sections can be derived from the density and amount of public space (the street) available.

In order to more successfully understand and address the complexity, there is a need to push beyond the generic representation (Figure A) of space or the top-down hierarchical representation (Figure B). Instead, there is a need to pair the work of Jaglin (2014) that uses hybrid models to connect user to state and the collective works of Caldeira (2017) and Bayat (2013) to ground what is meant by user and how users create space. From this pairing, it is possible to derive a series of design principles which feed into spatial strategies which offer scalable flexibility not just as intervention, but for ownership as well. This then offers, beyond access, choice to how the neighbourhood is changed, both by state and the community, ensuring more thorough accountability within the process.



(HIERARCHY OF SYSTEMS)

depiction of how representation change of conventional systems can shift priority perspectives and offer a more balanced image of the urban.

(STREET)

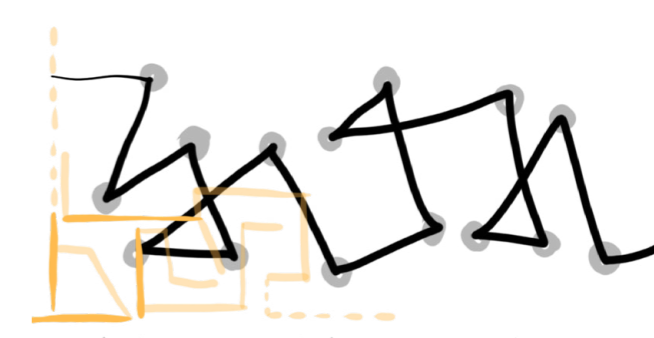
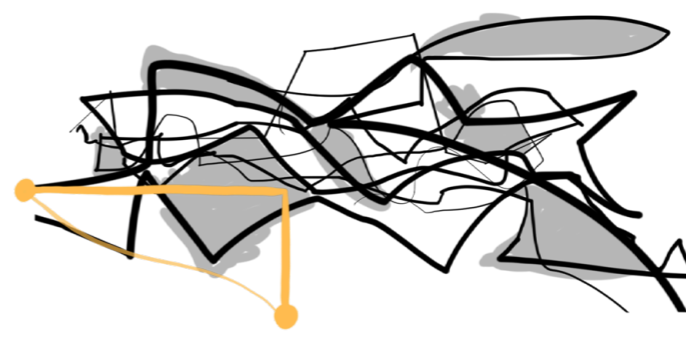
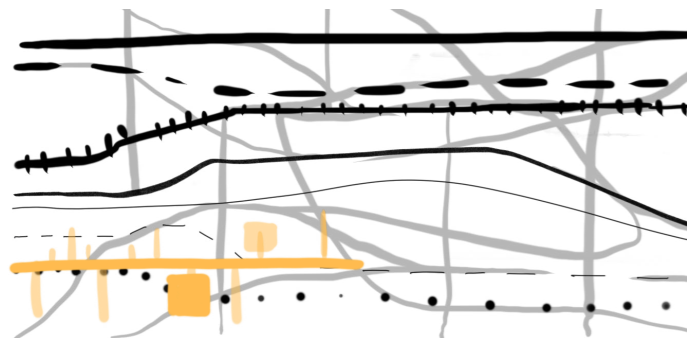
representation of how the reality of the street and its conditions changes across different sections of Du noon



“ENCOURAGES A SERIES OF DESIGN PRINCIPLES”

(tools)

Design Intention



allow *INTEGRATION*. for safe *CONNECTION*

refuse *STATICS* for sensitive *EXPANSION*

consider *REFLEXES* for public commons *DEMARCATIION*

promote *FLEXIBILITY* for communal resource *PROVISION*

The principle proposes that no item stands alone. Taking lead from the work of (Hanyurwumutima & Gumede, 2021), it is the intersection of function, mode and space that allows a desired purpose to thrive.

The principle acknowledges the rapid, ever-changing nature of the urban especially in environments that are established largely through auto-constructed, peripheral agency and encroachment processes (Bayat, 2013; Caldeira, 2017; Kamalipour & Dovey, 2017). It promotes working with existing realities to develop safe upgrading and densification instead of the removal of established settlements to create anew. Promoting renewal and upgrading from within takes lead from research done by Wolff Architects on how spaces like the Dunoon flats are built (Wolff, 2010). Further lead is taken from research done in the Diepsloot Reception Area in Gauteng as a way of how safe spaces can be built to accommodate the same rental-income densities and considers crucial safety concerns such as fire distances (Goethe-Institut & Poulsen, 2008). Application:

The principle aims to help reduce the vulnerability that exists with the ever-shifting peripheral state (Ewing & Krause, 2021) by providing the bare minimum to what is meant by structure that then allows shifting within safe parameters. This is done through the creation, maintenance and preservation of the public realm (Ewing & Krause, 2021) that involves the identification of nuanced spaces for intervention derived from a combination of community participation and state accessible spaces. These spaces are then demarcated for intervention through a series of appropriate built measures to protect these spaces from privatization in the short term as the public is established using various agents and ownerships until it is recognized by both state and collective users:

Through breaking down both needs and provision, the principle proposes flexibility in resource provision in vulnerable areas by encouraging safe, accessible communal resources as a way of extending infrastructure into social and educational needs as well. Using locational needs dependent on urban recognition status; specific, nuanced provision can be applied as acupuncture and fix points that hold together the urban fabric as built and then promote a positive social and recreational layering that is paired to the service provision. Avoiding ‘blanket’ provision could allow better budgetary decisions (1) that consider infrastructure and social together as one and (2) a potential further reach for service provision than is currently available to the most vulnerable areas, exacerbating the gap between state and user.

identifying existing areas of convergence

identifying functions that can share space effectively

promoting collaborative investment models

key intersections as example nodes and demarcated areas

multiple assets that enable vertical expansion

diversify responses to accommodate area nuances

identifying spaces crucial to the public realm

min. demarcation prevents privatisation

maintain shared & collaborative ownership

nuanced provision leads to successful & better reach

infrastructure + social points lead stronger ownership

provide transitional and meeting spaces

“THAT ENABLE SCALABLE SPATIAL STRATEGIES,”

Design Intention

(anatomy)

PRICKS



What are they?

Resource providing interventions that can be (1) stand-alone or (2) networks that can be add-on items to existing infrastructure that is intended to support a network or system of ‘pinpricks’ to create a grid.

What do they do?

Initiate - Provide entry points into areas of vulnerability for further intervention. They can also be small, low-cost mechanisms for increasing resource frequency.

What do they look like?

They are small infrastructural assistance elements like solar lighting, water points, trees, benches and Wi-Fi points that begin to assist with the design principle of public commons demarcation

POINTS



What are they?

Resource providers that operate as provision units and begin to pair with social networks for a more engrained impact. Points are largely the facilitators of alternative service provision models that have iterative potential within the greater framework.

What do they do?

Catalyze - Provide stabilizing points into areas of vulnerability, operating as demarcates but also models for safe economy, service provision and built expansion.

What do they look like?

They are modular unit-sized elements like sanitation blocks, waste collection stations and care facilities. They also include community gardens and potential housing blocks. Paired with a series of ‘pricks’ as support and initiation, points begin to resemble the public realm as relief points along a route.

CLUSTERS



What are they?

A collection of elements (both pricks and points) that act as localized hubs of urban upgrading. Intentionally centered along more mid-to-higher order routes, they are visible as (1) intersection upgrading (2) reimagined housing and (3) resource & community plugs that are a layering of infrastructural, social and educational functions.

What do they do?

Grow - As larger public space offerings they offer functional emergency assembly points, recreational assembly points and they offer larger scale services along prominent pedestrian routes and are used to support and initiate priority safety corridors.

What do they look like?

A collection of buildings, or point elements arranged to support ‘plazas’ as open space within dense residential portions of Dunoon & Doornbach.

CENTRES



What are they?

A mixture of existing public social institutions and new public social centres that form walkable hubs that offer the largest forms of gathering and communal space within the neighbourhood. Offering a mix of all available infrastructure, functions and programs, centres are intended to act as visible fixes that negotiate internally (to user) and externally (to state or partners) outside of the neighbourhood.

What do they do?

Fix - centres are intended to develop and address different complexities across the neighbourhood based on the urban condition both previously and currently to direct the trajectory of different urban collectives on a positive, beneficial path.

What do they look like?

Combining varying school phases, community buildings, resource centres, clinics and sport facilities, the infrastructure exists to support varying program requirements.

“PAIRED WITH SCALABLE OWNERSHIP STRATEGIES”

(anatomy)

Design Intention

Looking at Jaglin’s (2014) proposal for hybrid service delivery models, there is opportunity for use beyond spatially orientated intervention scales. With scales and ‘types’ of interventions identified, there is option for scalable ownership and investment strategies that exist with hybrid potential. Looking to bridge the user-state gap, there are several ownership options available. Together, private individual and public community form the long-term ownership vision. This would sit as a mixture as a way of balancing individual and collective

agency and ownership over space. However, private business through corporate social investment and other donation forms offer a mixture of capital and reoccurring monetary injection that will enable catalytic beginnings of key structuring strategies. This offers the various scales of spatial strategies a range of opportunity to impact the immediate and extended Dunoon in a real way. These offer a series of types and timelines of ownership that can be explored across the spatial strategies as an iterative example.

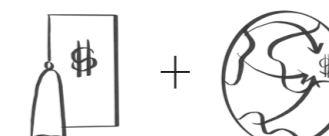


PRIVATE INDIVIDUAL



PUBLIC COMMUNITY

church, schools, community funding, non-government organizations



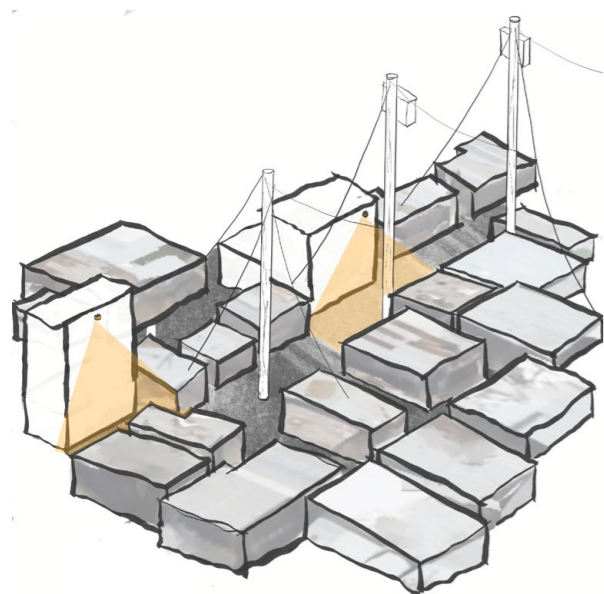
PRIVATE BUSINESS

corporate social investment, company impact investing



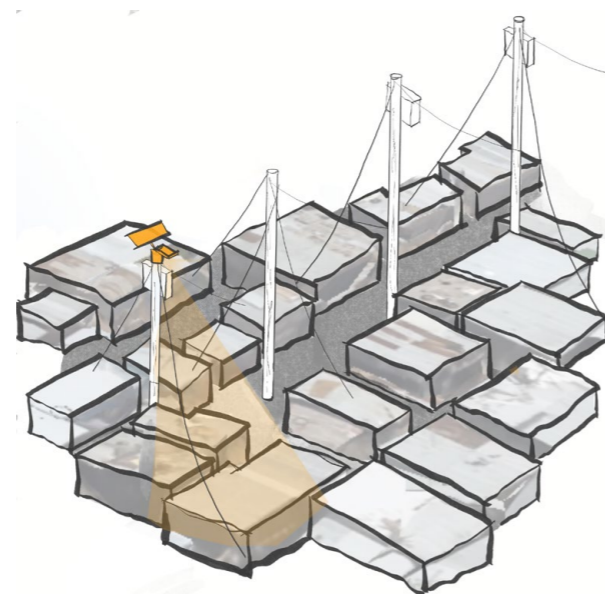
PUBLIC STATE

*City of Cape Town
Provincial government
National government*



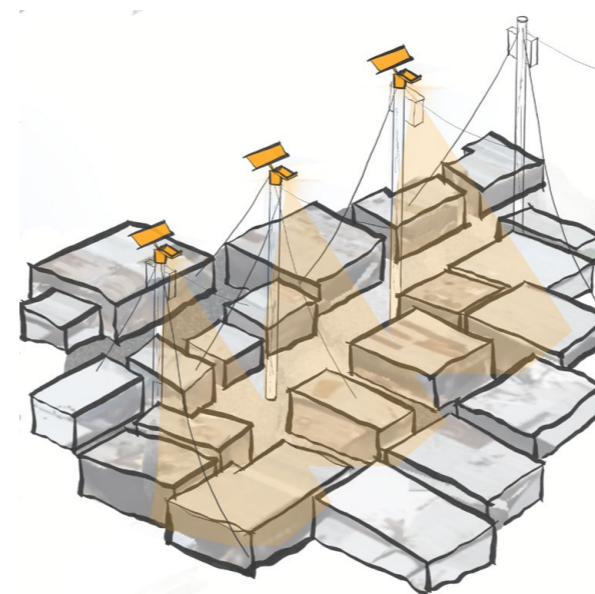
SMALL SCALE OWNERSHIP

Private, small-scale investment holds value for immediate user and direct adjacent as a ‘pinprick’ scale both as strategy and ownership



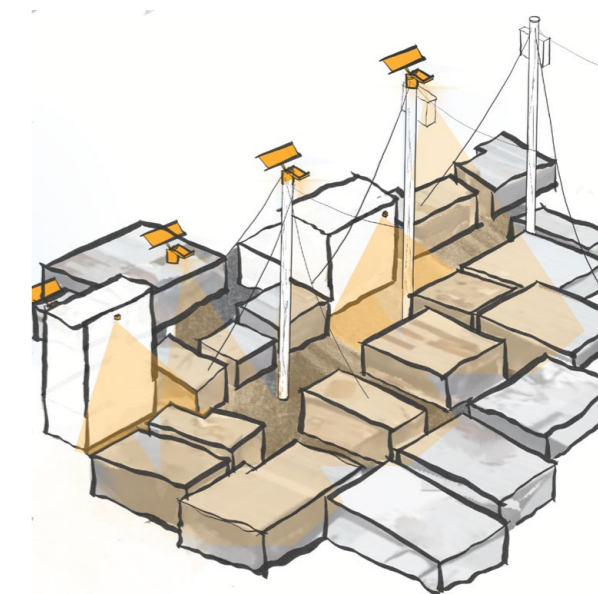
DONATED & TESTING OWNERSHIP

Small to medium scale donation offers testing sites extended to spaces of the community’s choice for immediate relief. Negotiated through NGO’s the scale of ownership is larger – paired – despite still being a ‘prick’ scaled spatial strategy



STATE INVESTED

Large scale investment from the state takes individual pricks to a grid extending the impact to a larger spatial strategy. However, the ownership, purely state, remains limited and would need to partner with community leaders for ownership (and maintenance) to be extended beyond the state.



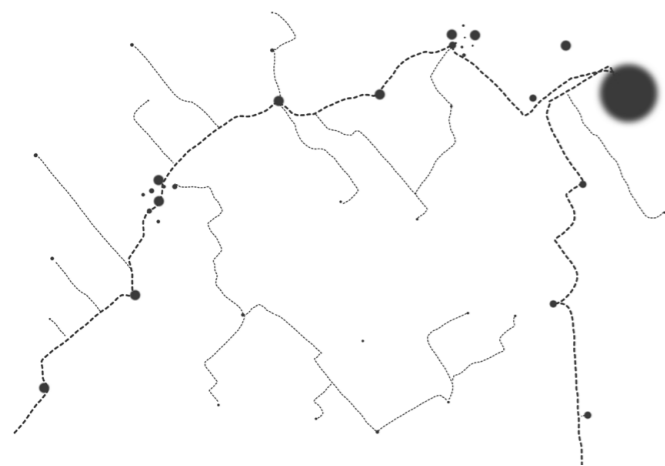
HYBRID OWNERSHIP

Offering the most robust form of ownership that extends from individual community to partners to state, the scale of spatial intervention varies and builds ‘over each other’ to increase provision and impact opportunity.

“FOR FLEXIBLE AND STRUCTURED NEIGHBOURHOODS.”

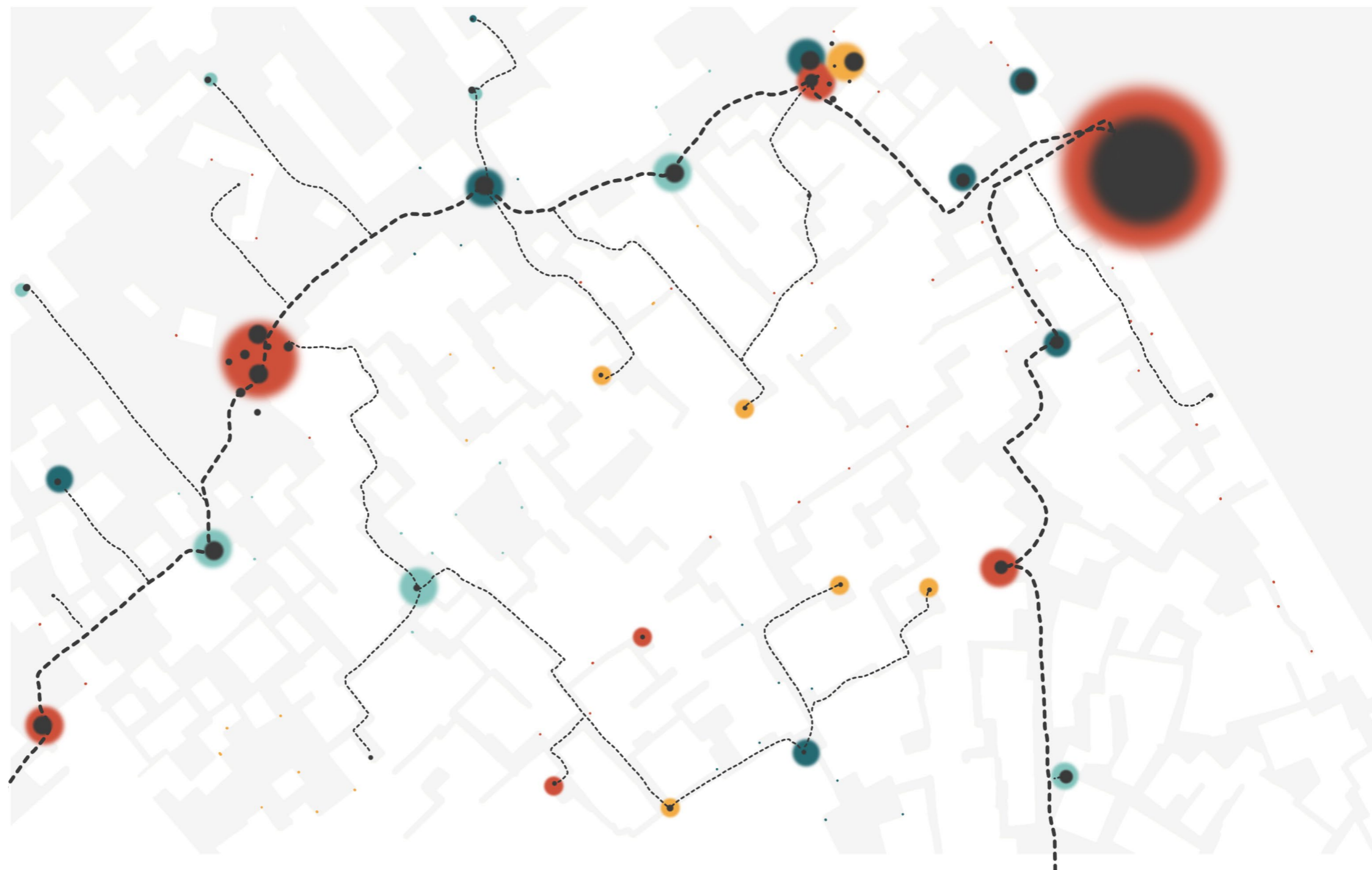
(access)

Design Concept



The pairing of scalable spatial strategies and ownership strategies, together, provide a flexible way to intervene in even the most dense of environments. This flexibility is also extended to how these interventions develop over time, offering a greater platform for community participation and involvement throughout the process.

The intention would be to first develop attraction through the state and the first phases of intervention depending on the needs within a particular urban collective. This would ensure that there is a clear intention with the collective but also that there is a guide on what is required for each urban collective within Dunoon, giving direction to external investment. This would be a joint state-user negotiation and initial investment would target the biggest concerns for both parties - scale negotiable. Thereafter, in order to develop greater traction, external and internal parties would be approached to negotiate further investment that extends the capacity of the urban 'bones' and 'joints' within the collective for a continuously upgrading urban fabric within Dunoon. Finally, over time, the emergence of a centre would offer a fix point for large scale provision, assembly, and environmental concern within the collective.

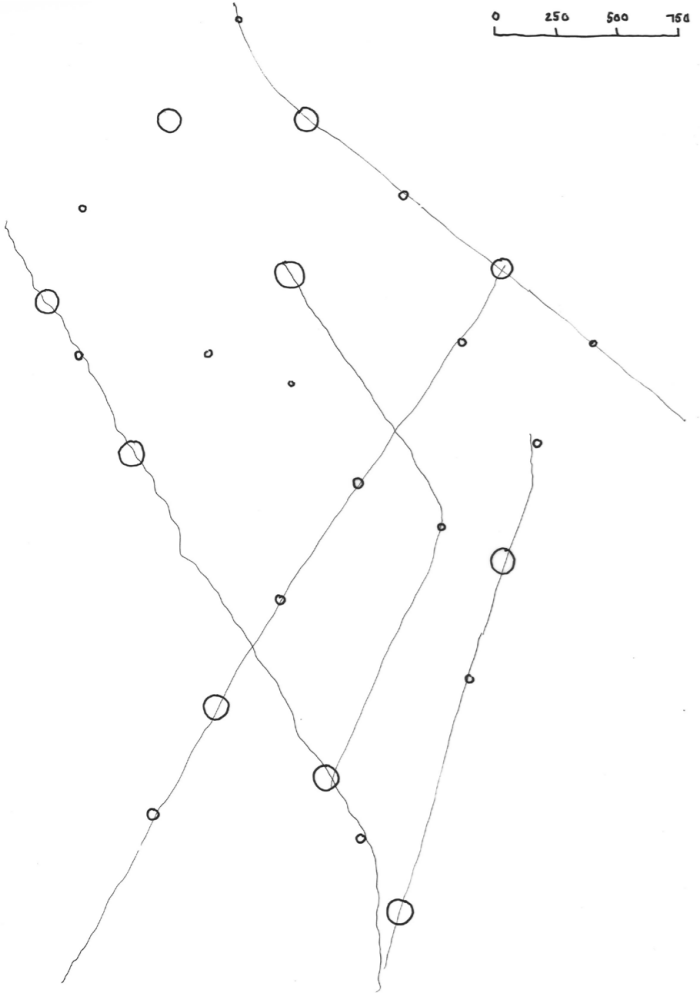


“FOR FLEXIBLE AND STRUCTURED NEIGHBOURHOODS.”

Design Concept

(framework)

Developing a framework for neighbourhood structuring then requires a minimal approach that offers the ability to reach all parts of Dunoon without prescribing (re-prescribing) their existence according to planned notions.



CONCEPTUAL FRAMEWORK

Offering the 'bones and joints' to allow both access and movement within the urban fabric while extending state reach to match the full extent of Dunoon residents



PRIMARY ROUTES

Offer bulk service connection / 'trunk' routes/ vehicular / form major travel routes for intervention first at (1) intersection (2) midways, (3) every 100m and (4) 50m



SECONDARY ROUTES

Extend state reach through the public realm/ mobility includes vehicular and pedestrian (varies treatment)/ offers intervention first at (1) major intersection, then (2) community decided spaces developing the route



PERMEABILITY ROUTES

Blur edge conditions surrounding Dunoon/ offer permeability and access to adjacent areas / combination of (1) bridges, (2) underpasses and (3) intersections supported by activity zones

“FOR FLEXIBLE AND STRUCTURED NEIGHBOURHOODS.”

Design Concept

(framework)



CENTRES

Implemented to address different conditions across the focus area. Includes (1) all age learning centres (2) agricultural centres (3) ecological centres (4) transport centres and (5) health centres and (6) development centres



CLUSTERS

The public realm where a collection of service provision, state and user interest and community outreach exist. These are incrementally developing or upgrading spaces that claim 'joints' along key routes



PRICKS & POINTS

Small or grid scale intervention that promotes safer, more balanced essential service provision. These are always paired to extend provision beyond purely infrastructure for success over time.



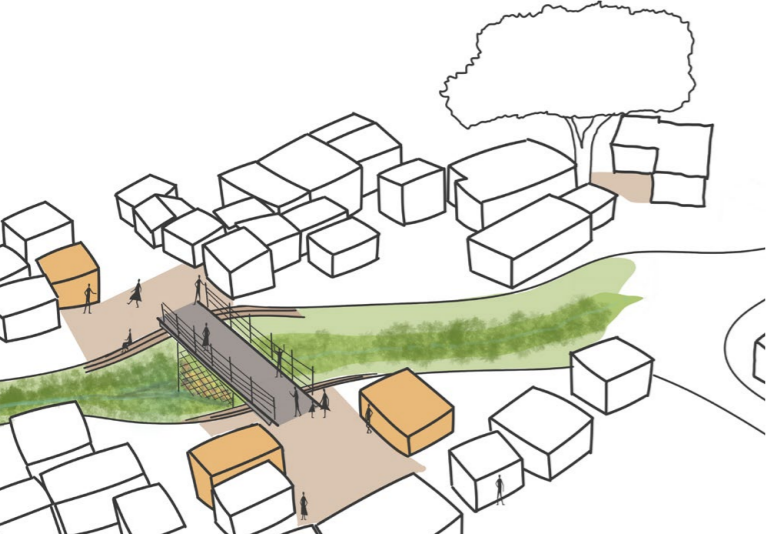
DESIGN FRAMEWORK

Offering a guide on where and how intervention is required and can be implemented, the research begins to explore a series of contextually grounded interventions that highlight the flexibility of chosen intervention spaces depending on community needs.

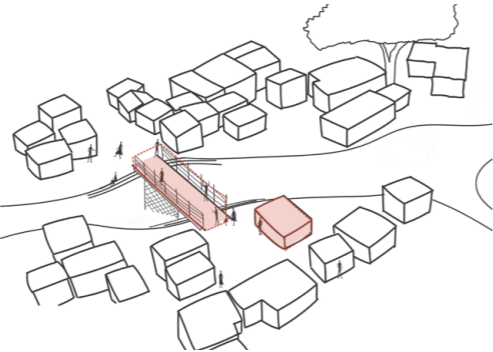
“SENSITIVE TO USER AND STATE NEEDS.”

Design Concept

(non-contextual examples)

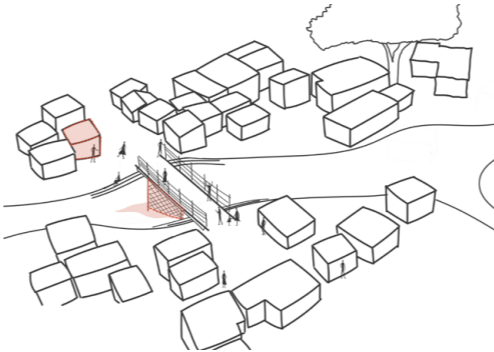


NATURE CONSERVATION



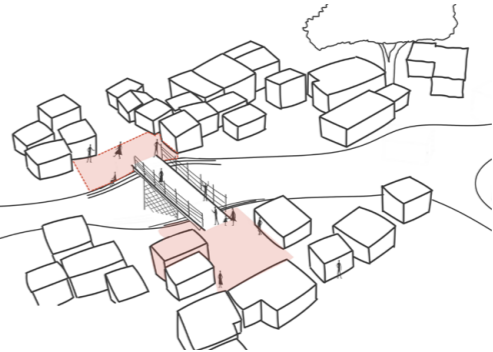
SAFE SANITATION

NGO & PRIVATE INVESTMENT + POTSDAM WATER TREATMENT



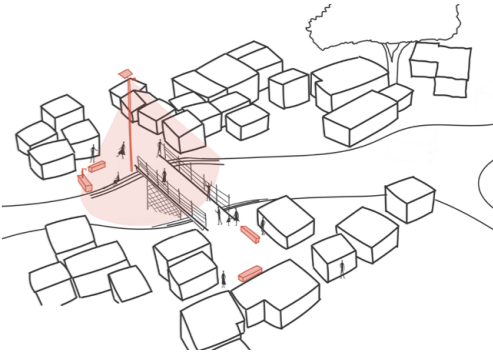
WETLAND CONSERVATION

MUNICIPALITY + EPWP



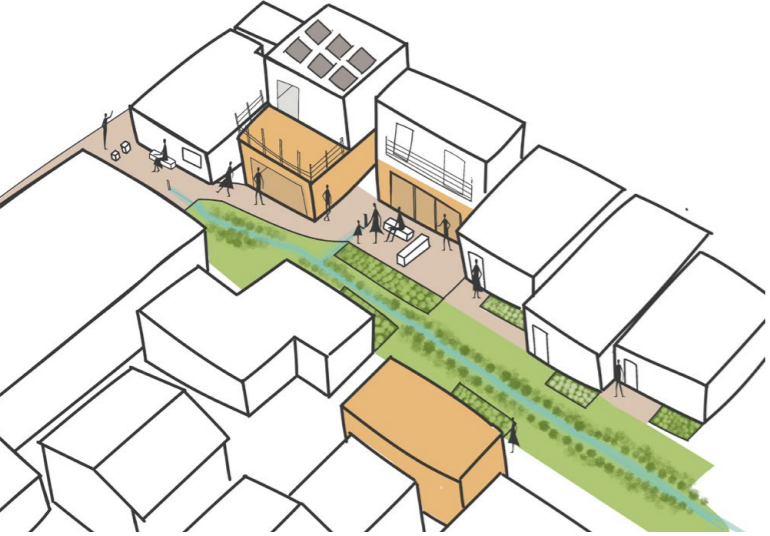
WASTE & FARMING EDUCATION

NGO & CONSERVATIONISTS

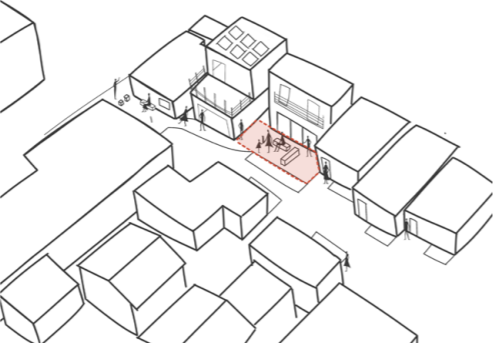


ACCESSORIES

user need + state need + social need + accessory

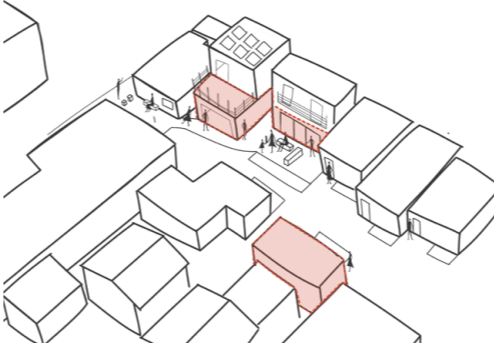


DISASTER RELIEF



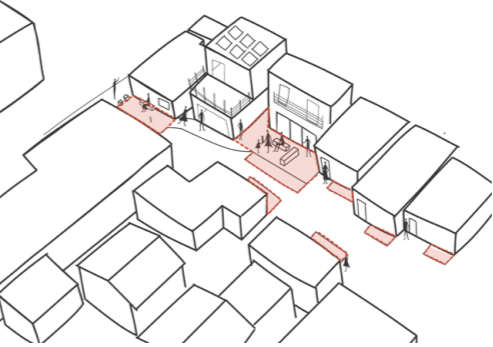
SAFE WATER & INTERNET

NGO



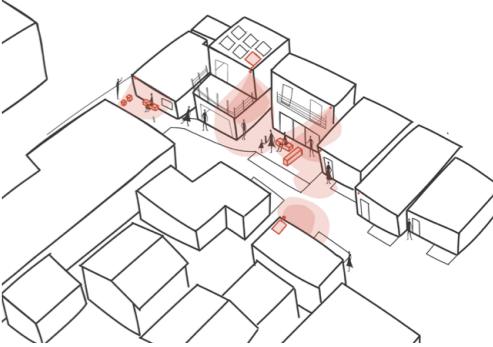
WASTE MANAGEMENT

MUNICIPALITY + EPWP



WASTE & FARMING EDUCATION

COMMUNITY COMMITTEE + NGO + PRIVATE DONATION

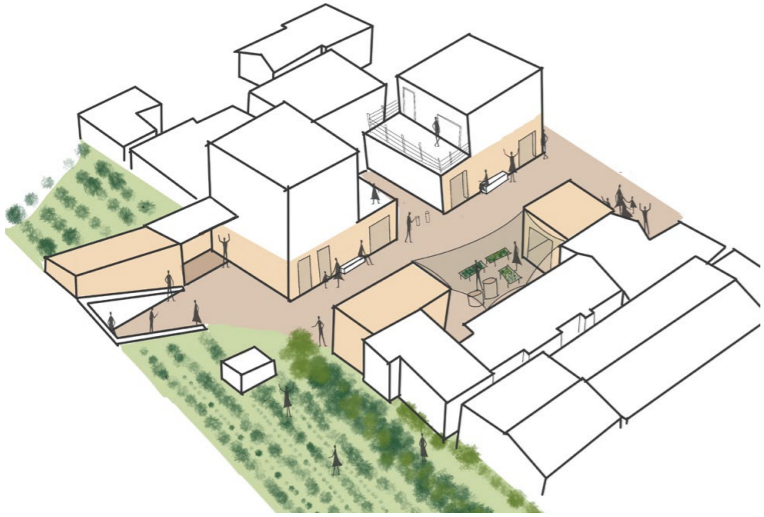


ACCESSORIES

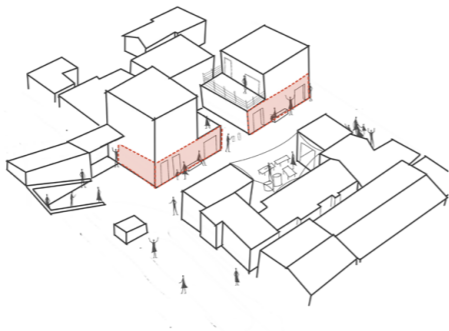
“SENSITIVE TO USER AND STATE NEEDS.”

Design Concept

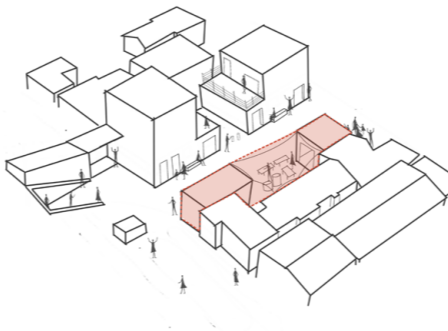
(non-contextual examples)



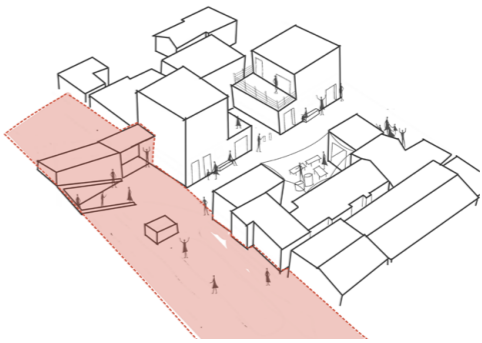
GREEN SPACES



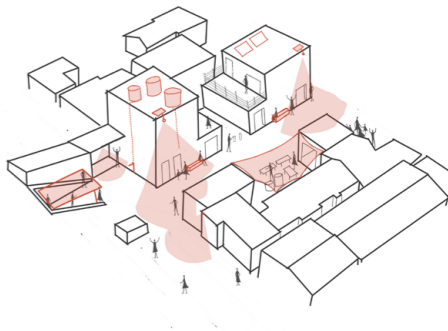
SAFE SANITATION +
NGO + POSTDAM WWTC



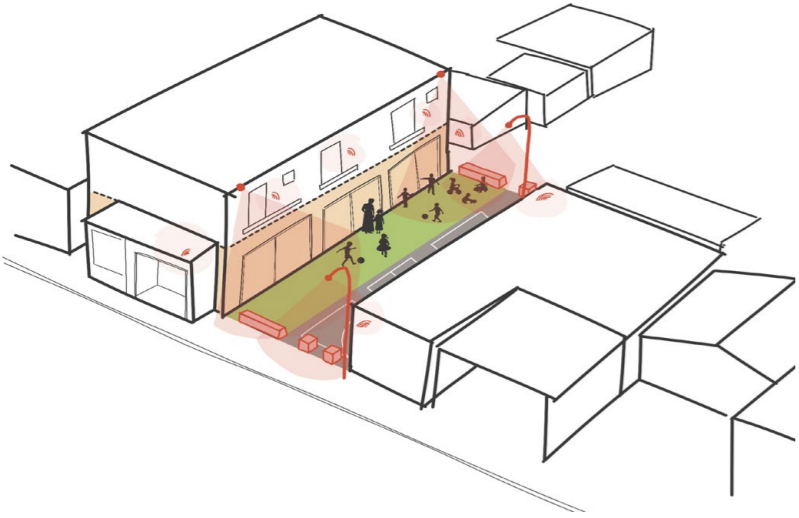
WASTE MANAGEMENT +
MUNICIPALITY + EPWP



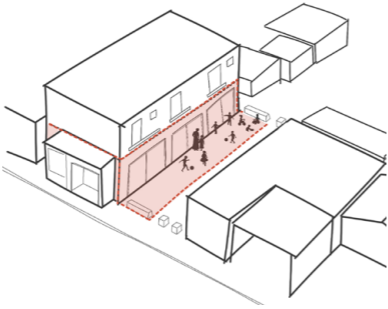
WASTE & FARMING EDUCATION +
COMMUNITY COMMITTEE + NGO
+ PRIVATE DONATION



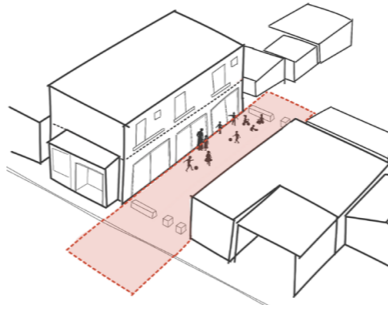
ACCESSORIES



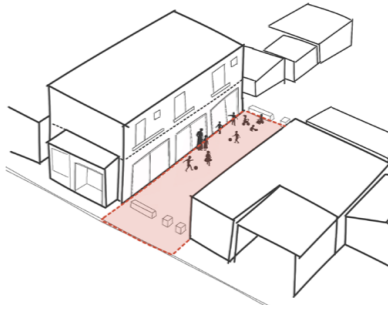
RECREATION



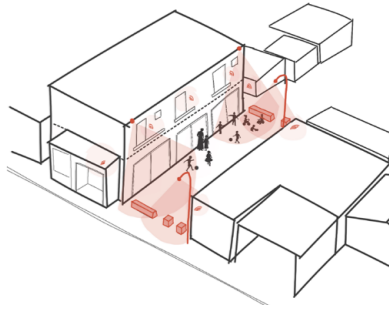
educare facilities +
DEPT. OF EDUCATION + NGO +
COMMUNITY COMMITTEE



servitude access +
MUNICIPALITY



community park +
MUNICIPALITY



accessories

“PRICKS,”

Design Development

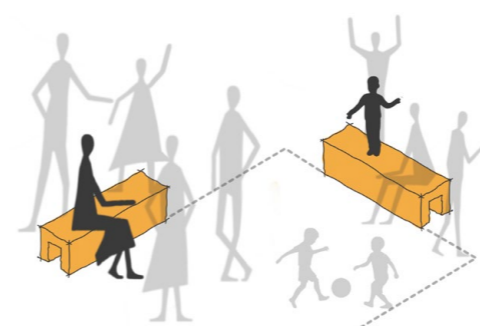
(catalogue)

Offering a catalogue of the beginnings of design, pricks explore the smallest scales of intervention that can offer extended impact. Direct users benefit from the infrastructure, but indirect benefits are offered through activated holding points along routes that encourage gathering and social spaces. These pricks stand on the shoulders of precedent projects like the Emthonjeni water points and open-air classrooms in Monwasbisi Park, Khayelitsha (Ewing & Krause, 2021; VPUU, 2017), the water point upgrades in Europe informal settlement, Gugulethu (Thompson, n.d.), lighting projects like LightUp (Borofsky & Briers) or individual work in the Medellin ‘favelas’ (Coolville feat.:The Life-Sized City, 2024) which looks at scaled lighting in auto-constructed settlements and public space exploration by Linda HeiB (2022) in Tandale, Dar es Salaam which considers tree canopies and trunks as crucial to the infrastructure of the public realm. These precedents offer great insights into tested strategies that work in similar complex urban environments.



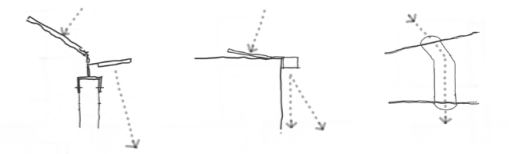
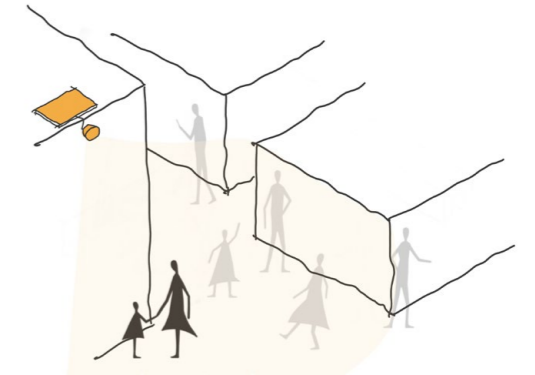
WATER POINTS

Thompson, A. (n.d.). Europe Informal Settlement water point upgrade.



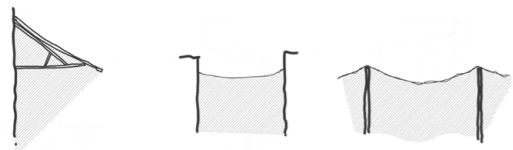
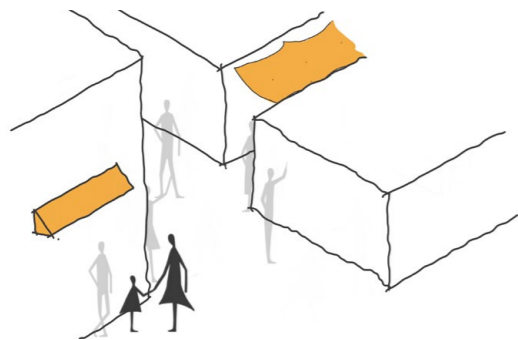
BENCHES

VPUU. (2017). Emthonjeni: Open air classrooms in informal settlements



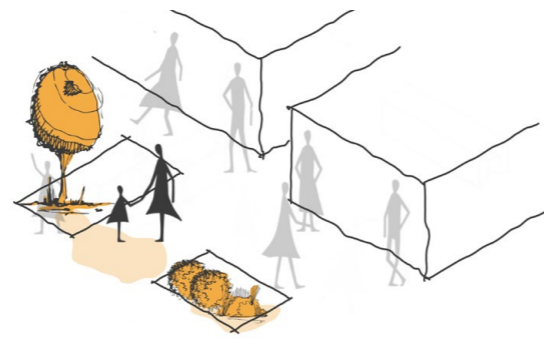
SOLAR LIGHTING

Borofsky, Y., & Briers, S. (n.d.) The impact of public lighting in informal settlements in Cape Town.



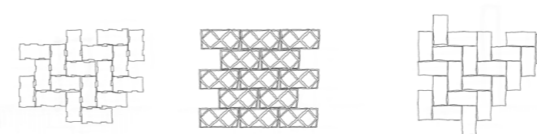
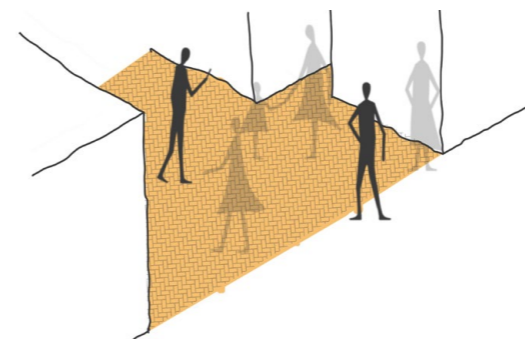
SHADING

HeiB, L. (2022). Stories behind places: The significance of public usable space for residents of informal settlements in Dar es Salaam, Tanzania (pg. 44-45)



VEGETATION

HeiB, L. (2022). Stories behind places: The significance of public usable space for residents of informal settlements in Dar es Salaam, Tanzania (pg. 44-45)



PAVED WALKWAYS

Thompson, A. (n.d.). Europe Informal Settlement water point upgrade



WIFI POINTS

VPUU. (2019, 19 June). V-NET: Bringing Internet Connectivity into Low-Income Areas.

“POINTS,”

Design Development

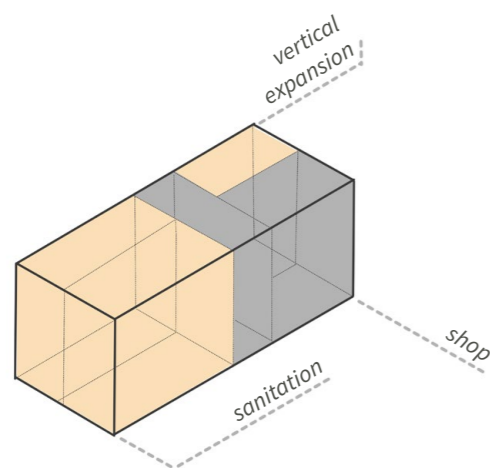
(catalyst)

As an extension of pricks, building up to a layered intervention of infrastructure and social and education program, points offer the next step to demarcation of the public realm through resource provision. Considering the current conditions of sanitation, waste collection, greenery within settlement areas, point offer alternative service provision models that attach infrastructure to external partnerships and local economy. This extends accountability to maintenance beyond the state which remains a stakeholder in the ‘conventional’ aspect of the service provision but allows ownership by additional parties to allow for better, more consistent and safe service provision. Again, standing on the shoulders of

external precedent such as ‘bartering’ programs linked to transport in exchange for recycling in Curitiba, Brazil (A convenient truth: Urban solutions from Curitiba, Brazil, 2006), safe housing practices through ‘model’ blocks in the Diepsloot Reception Area, Gauteng (Goethe-Institut & Poulsen, 2008), and alternative sanitation solutions as in the Diepsloot Reception area as well (Poulsen et al., 2012). Further inspiration lies again in the Emthonjeni project which used water points as outdoor early childhood development classrooms, extending built into both social and education (Ewing & Krause, 2021; VPUU, 2017). Additionally, tackling waste precedents such as the VPUU led Waste Management Station & Programme

(VPUU, 2021) with positive impact in places like Lotus Park, Gugulethu (VPUU, 2020) that encourages ‘recycling’ of wet waste to create fertilizer but also enables easy waste management within small spaces like backyard dwellings and auto-constructed flats. These ‘points’ offer extended impact by alleviating pressures on adjacent infrastructure by promoting safe, beneficial practices alongside each service provision type – for example, wet waste disposed of correctly, means it is no longer being disposed of in ablution facilities or natural environments which attract pests (Cele & Pharoah, 2020; Zweig, 2020). As a cyclical practice upgrading process, points encourage both direct and indirect positive impacts on quality of service provision in these complex environments.

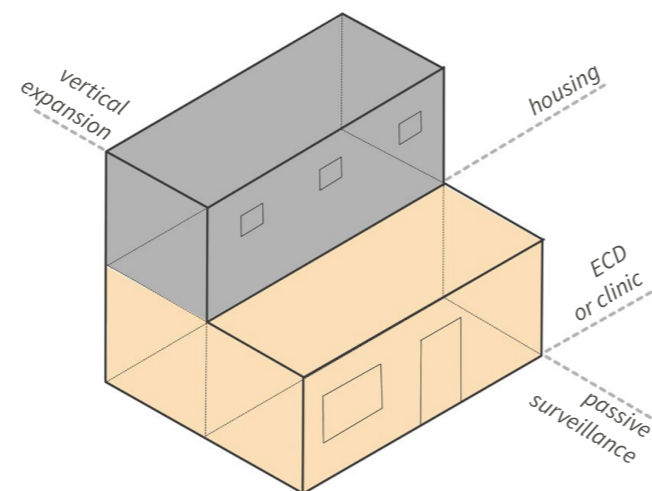
solar lighting
constant monitoring
income generation



ALTERNATIVE SANITATION

Referenced from a competition proposal in the Diesloot Reception Area, Gauteng, South Africa for alternative service provision in dense informal areas. Poulsen, L., Silverman, M., & Eicker, K. (2012)

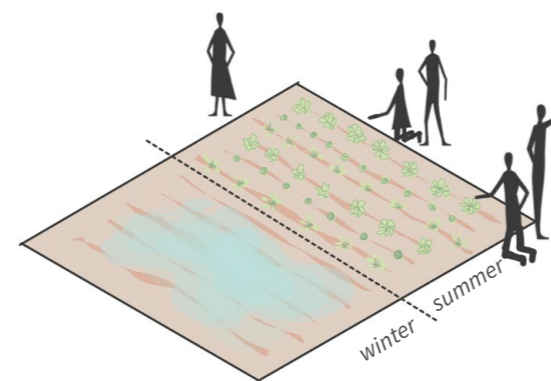
built beyond housing
physical and financial asset
localise facilities



CARE FACILITY

Inspired by the emthonjeni project in Monwabisi Park, Khayelitsha, Cape Town, South Africa for attached provision to education in dense informal areas. Ewing, K., & Krause, M. (2021)

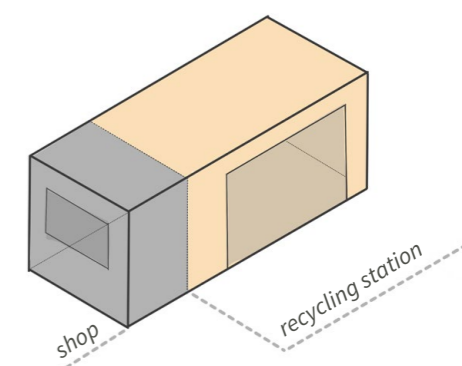
heat control
flood control
fire break



COMMUNITY GARDENS

Offering seasonal assistance - food in summer and flood control in winter, community or individual family gardens offer immense opportunity for positive urban growth

waste management
income generation
token/ exchange system
monitor dumping



WASTE COLLECTION/ RECYCLING STATION

Inspired by the work of the VPUU in Lotus Park, Gugulethu, Cape Town in providing alternative wet waste management options as part of agricultural education and data sharing. VPUU. (2021)

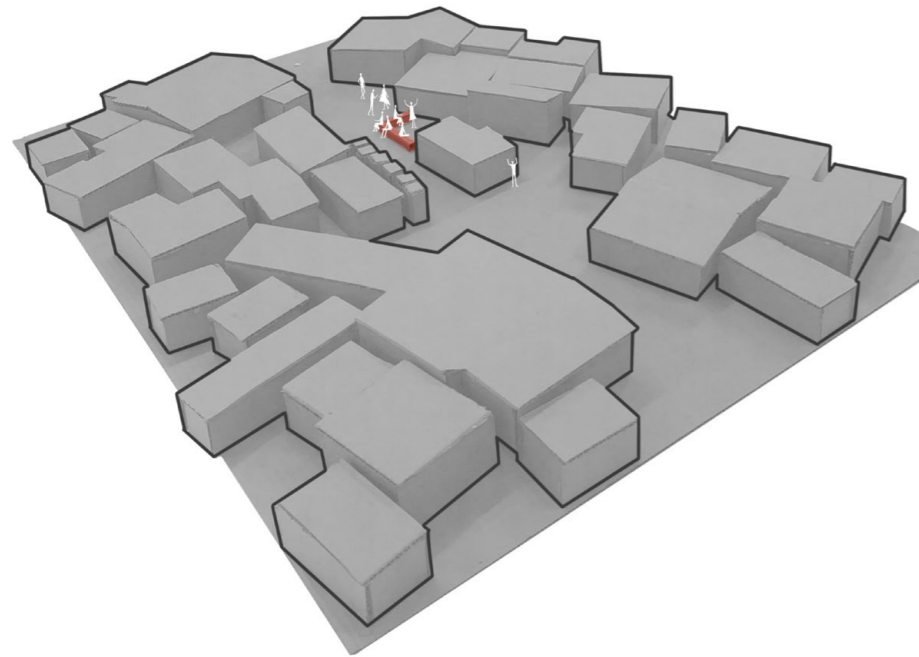
“CLUSTERS,”

Design Development

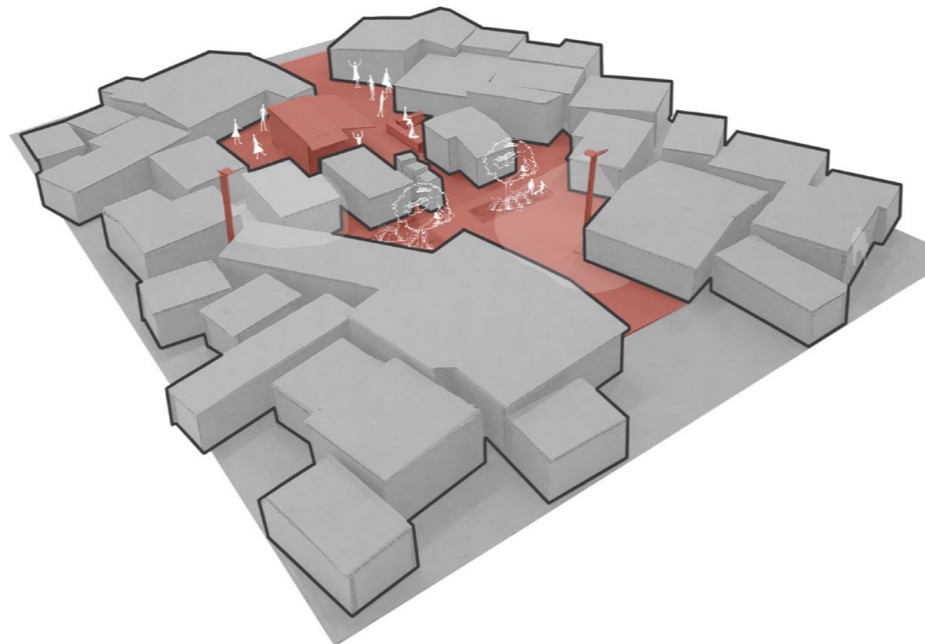
(grow)

Developing into small-scale nodes of intervention, clusters offer the beginning of true negotiation between state and user as well as other stakeholders. Situated along main routes, clusters serve as entry points to state service provision in the future. By holding firmly onto the public realm, clusters ensure the neighbourhood maintains access to state facility and service provision, something often lost or made vulnerable in the process of rapid urbanisation through auto-construction. Accommodating for state intervention in the future, clusters begin in the present as pricks, upgrading to a point and then a collection of points concentrated,

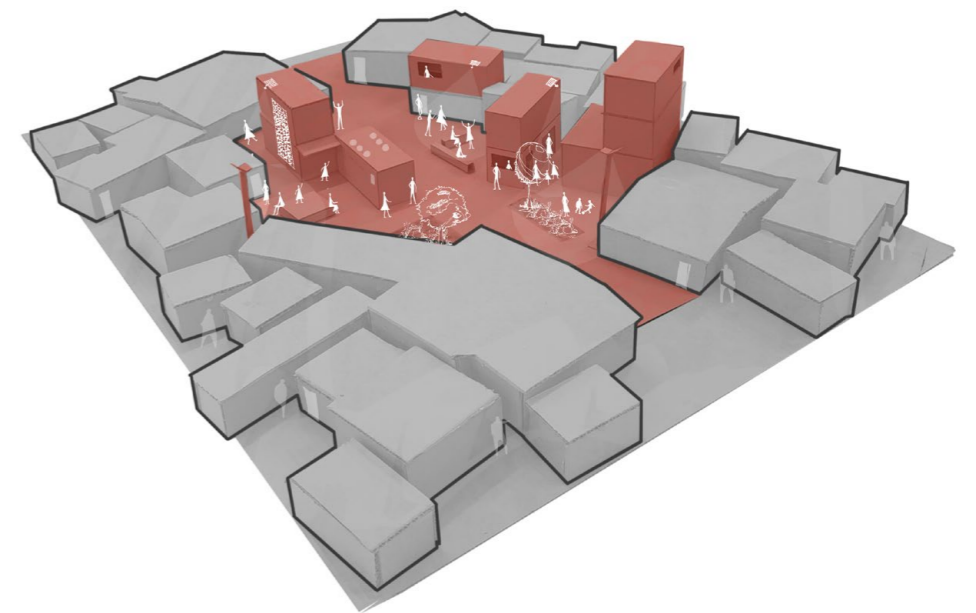
over time, into a cluster that forms a ‘joint’ in the bones of the urban structure. These joints or knuckles then offer entry for state to access opportunity into the more intimate and densely built portions of the settlement. Clusters, more a process than an intervention, begin to elasticize the meaning of the scalable spatial strategies presented. While concentrated points on intervention, they are also the result of space over time (Caldeira, 2017) with incremental re-claiming of the public realm without competing for time against auto-construction urbanisation and loss of state accessibility.



ENCROACH



DEFEND & ENCROACH



DEFEND

Exploration of cluster development over time which plays on terms used by Bayat, A. (2013) - encroaching: claiming space through demarcation for the public commons. Establish fix point by pairing with infrastructure such as water point & seating. Precedent: Thompson, A. (n.d.). Europe informal settlement water point upgrade. - defend: maintain hold over the space through activity, inhabitation and use.

“CLUSTERS,”

Design Development

(space over time)



EXISTING SPACE IDENTIFIED



DEMARCATION BY PRICK



EXANSION BY PRICKS & POINTS



EXPANSION OF PUBLIC REALM



PROVISION OF SERVICES



DENSIFY VERTICALLY OVER SERVICES



SOCIAL & EDUCATIONAL LAYERING



PROVISION OF SERVICES



SAFE HOUSING PRACTICE



RE-CLAIMED PUBLIC REALM & ACCESS

Exploration of subtle cluster development over time

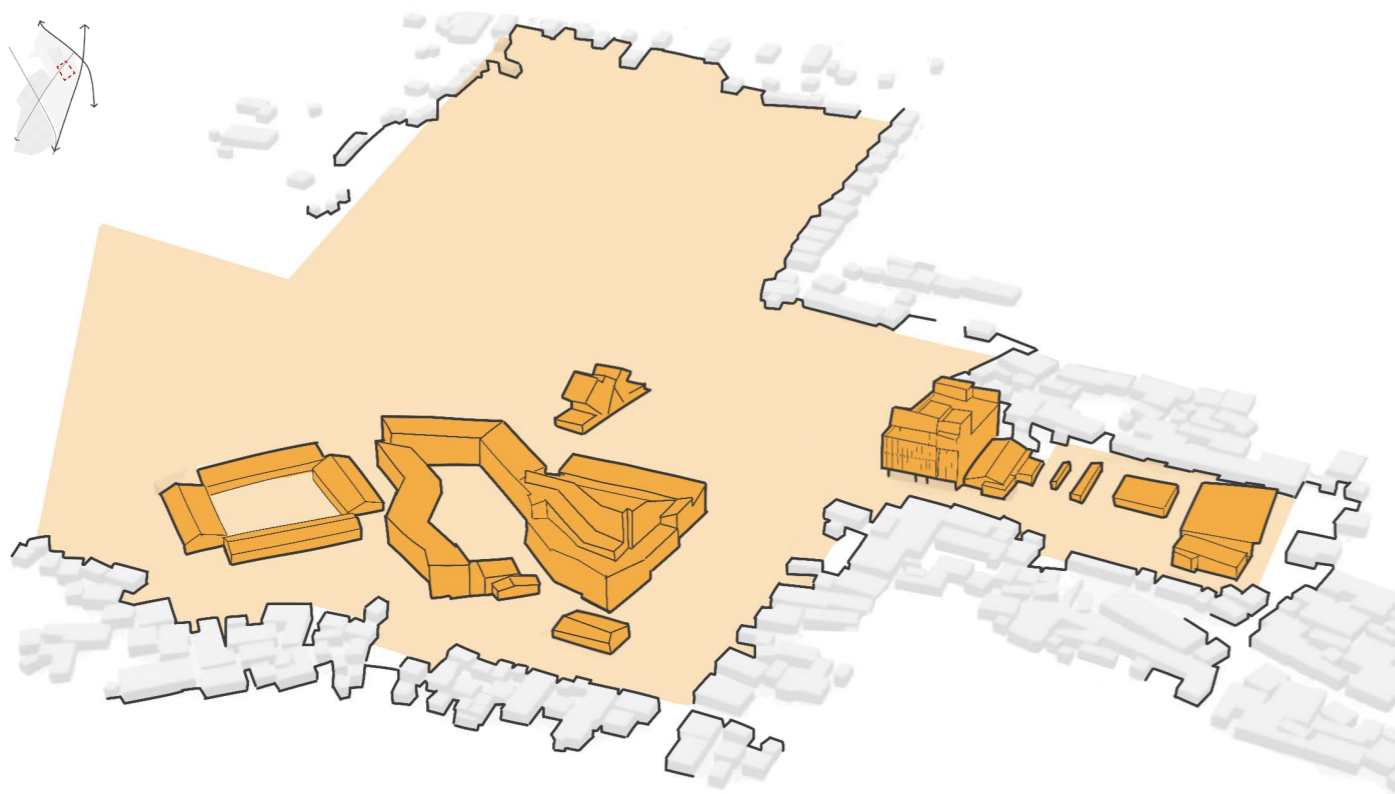
“AND CENTRES”

Design Development

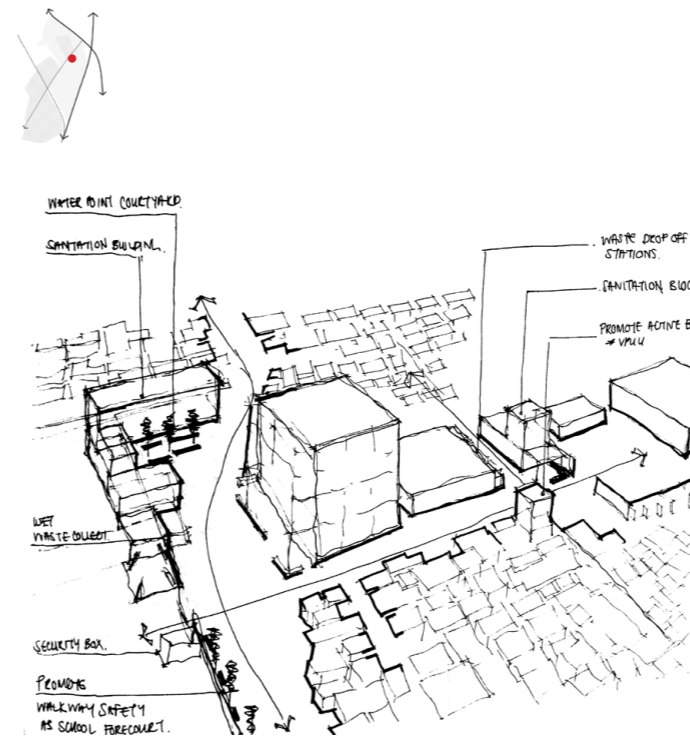
(fix points)

Existing centres offer fix points for state intervention to begin in the now while future centres can be developed across the focus area to respond to the varying urban realities across the neighbourhood. Here, pairing with external projects becomes beneficial, not only in terms of funding opportunity, but also in terms of giving the neighbourhood more permeability to enable positive urban interaction in the developed future.

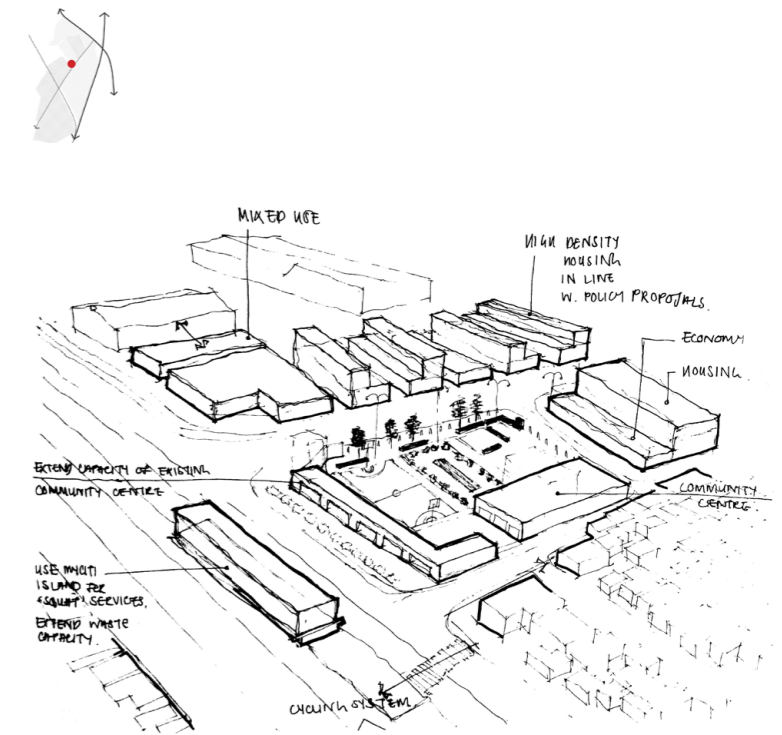
Implemented to address different urban collective conditions across the focus area of Dunoon, proposed centres include (1) existing all age learning centres throughout (2) new agricultural centres under the northern power lines (3) ecological centres along the Diepriver Wetland Corridor (4) transport centres and (5) health centres and (6) development centres that respond to future development along the urban edge.



EXISTING CENTRE
Learning & Innovation Precinct



EXISTING CENTRE EXPANSION
Safe, dignified sanitation, workshops



NEW CENTRES PROPOSED
Secondary Learning & Recreation Precinct

“CAN OFFER SOLUTIONS ACROSS REALITIES.”

Design Development

Using active-participant storytelling, with ranging character ages, job statuses and living condition realities, the research was able to develop key routes, concerns and interests that are connected to a grounded interpretation of Dunoon. Spanning across the intervention exploration precinct, the characters and their families were ‘followed’ on daily and weekend jounrnies to ellicit key information relating to access and the public realm.



ZAMA



LLOYISO

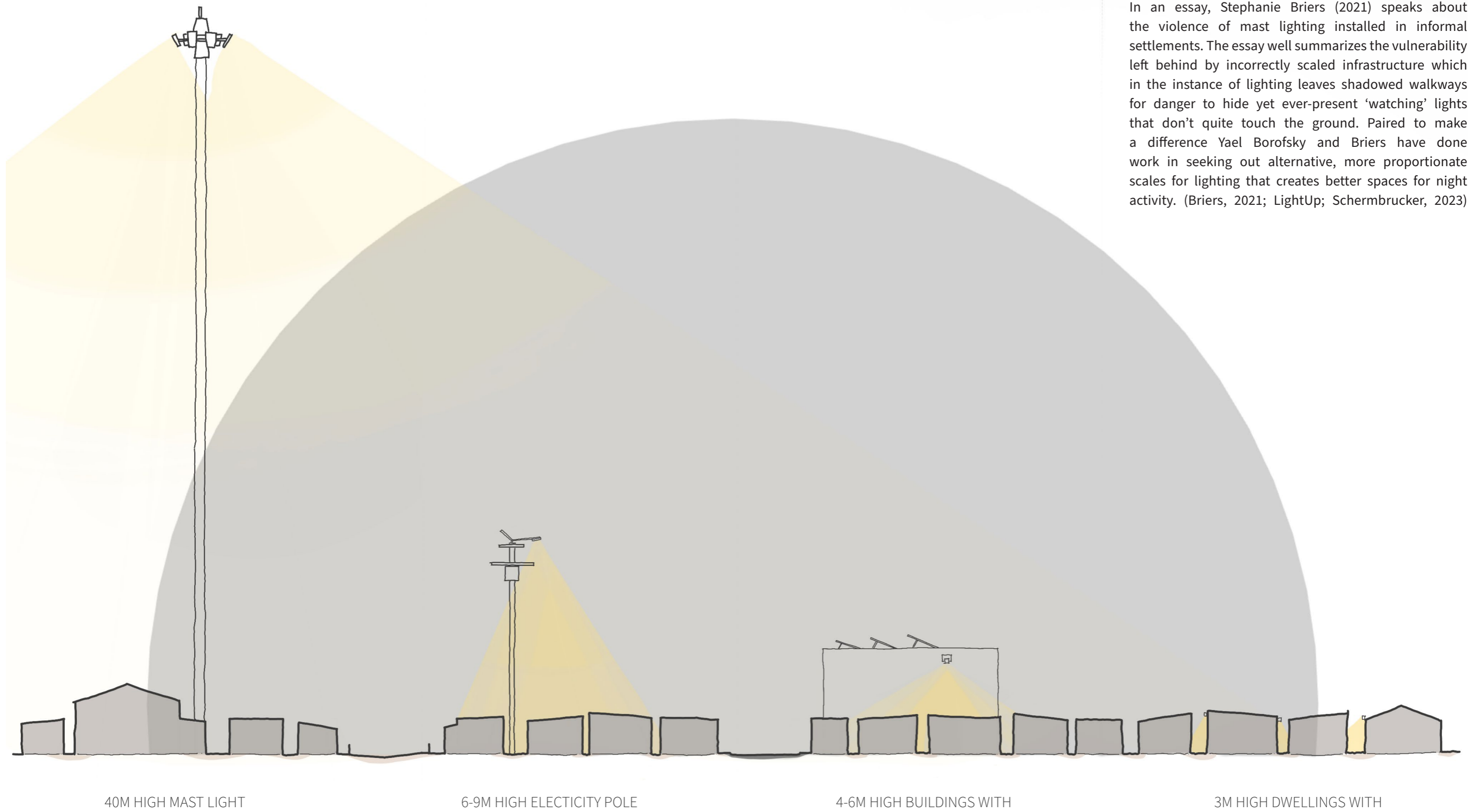


LUSANDA



FUNDIWE

SETTING THE SCENE: THE DESIGN IMPLEMENTATION

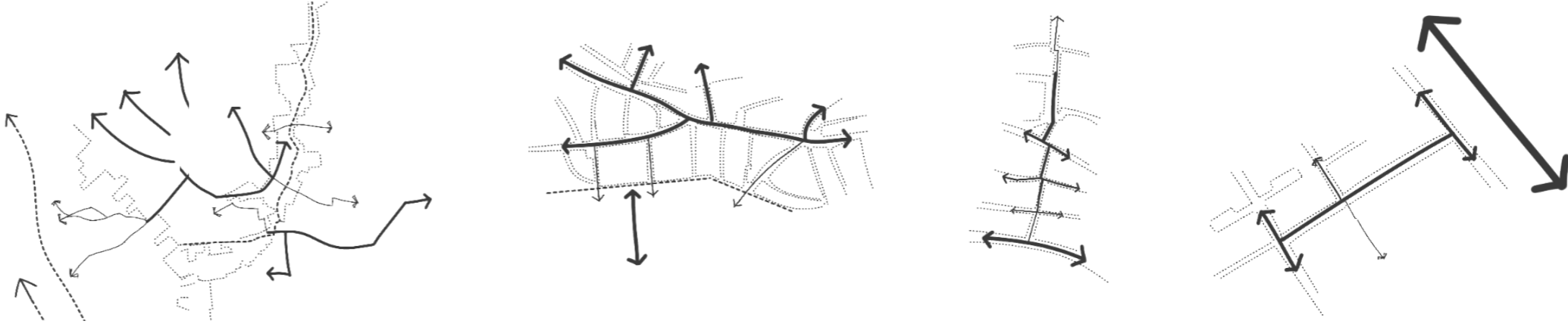


In an essay, Stephanie Briers (2021) speaks about the violence of mast lighting installed in informal settlements. The essay well summarizes the vulnerability left behind by incorrectly scaled infrastructure which in the instance of lighting leaves shadowed walkways for danger to hide yet ever-present 'watching' lights that don't quite touch the ground. Paired to make a difference Yael Borofsky and Briers have done work in seeking out alternative, more proportionate scales for lighting that creates better spaces for night activity. (Briers, 2021; LightUp; Schermbrucker, 2023)

“TARGETING KEY CONCERNS OF RESIDENTS”

Design Implementation

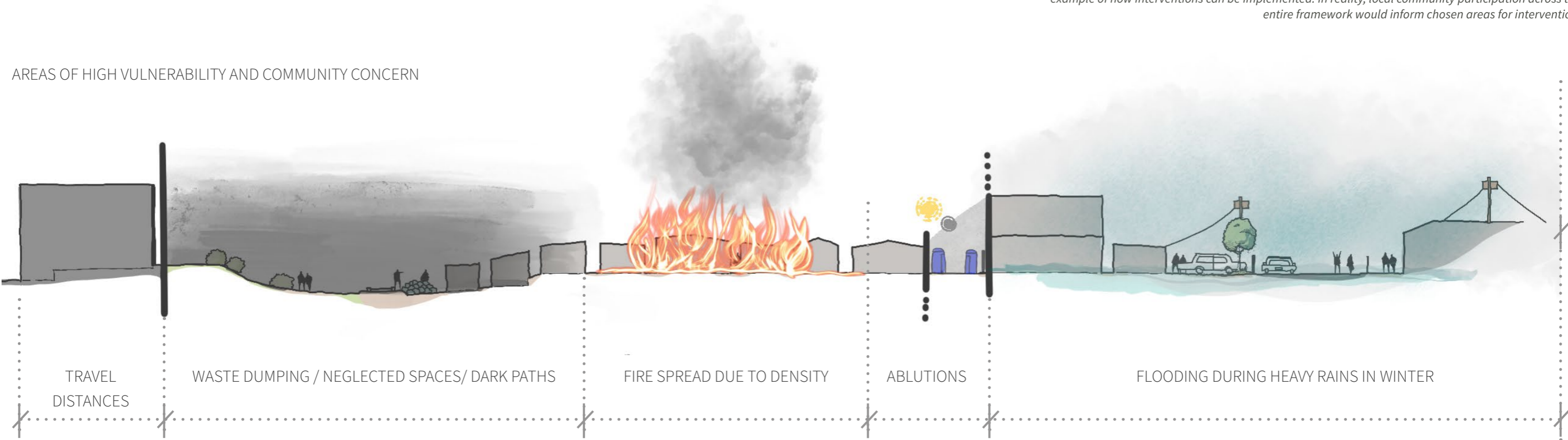
Key areas brought up in the exploration were zones of transition between different urban collective conditions, especially moving further away from the planned (and serviced) realm. Additional concerns (listed below) varied depending on the character and their family concerns based on where they lived and their immediate resources and service access. Other concerns were of more seasonal nature - flooding or disaster related due to insufficient service provision in certain areas - fires. Beginning with these major concerns formed the first steps of interventions that sought to alleviate one or more of these vulnerabilities experienced within the explored precinct contexts.



TRANSITIONAL ZONES ACROSS URBAN REALITIES

These zones offer a useful space to explore the application of various spatial strategies as an iterative example of how interventions can be implemented. In reality, local community participation across the entire framework would inform chosen areas for intervention.

AREAS OF HIGH VULNERABILITY AND COMMUNITY CONCERN



“IN CONTEXT SPECIFIC EXAMPLES”

Design Implementation



ZONES OF EXPLORATION

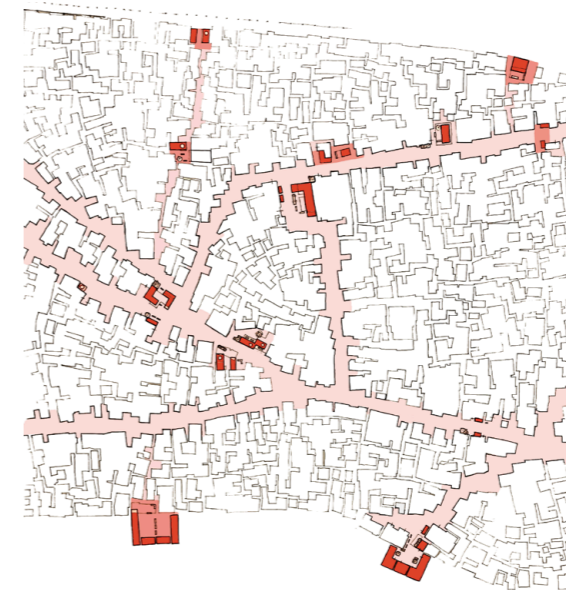
Key areas brought up across all character stories included Doornbach realities, the existing learning and innovation precinct and the claimed spaces with the planned extents of Dunoon which were initially intended as parks and other spaces. These areas are explored through different intervention targets but all offer very similar relief to the different areas highlighted however differently.

“DEMONSTRATES THAT A PHASED APPROACH”

Design Implementation



- 01 ACTIVITY ZONE GF - sanitation, waste recycling/ FF - housing / light
- 02 INTERSECTION GF - sanitation, waste recycling/ light/ water point
- 03 INTERSECTION GF - sanitation, waste recycling/ light/ play area
- 04 ACTIVITY ZONE GF - church/ FF - housing / public seating
- 05 ACTIVITY ZONE sanitation/ water point waste drop off point
- 06 EDGE INTERACTION educare/ sanitation / FF - housing/ recreation area
- 07 ACTIVITY ZONE sanitation/ recycling station/ outdoor classroom
- 08 COURTYARD sanitation + water tank / semi-private seating/ vegetation
- 09 EDGE INTERACTION sanitation/ water/ lighting
- 11 EDGE INTERACTION sanitation/ water/ lighting
- 12 COURTYARD GF - community hall + sanitation / FF - housing
- 13 EDGE INTERACTION sanitation
- 14 COURTYARD GF - sanitation + internet cafe / FF - housing / play area
- 15 COURTYARD community garden / water collection tanks
- 16 COURTYARD sanitation/ water tank/ garden space
- 17 COURTYARD educare/ play
- 18 ACTIVITY ZONES sanitation / recycling shop
- 19 ACTIVITY ZONE sanitation + public seating / lighting

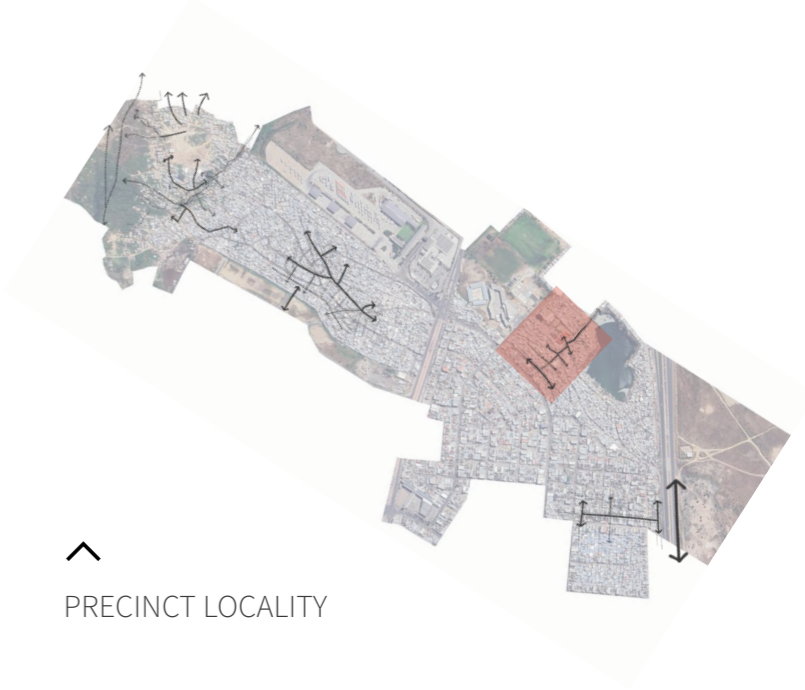


“CAN USE STRATEGIC ACTIVE ZONES TO DEVELOP SAFETY ROUTES”

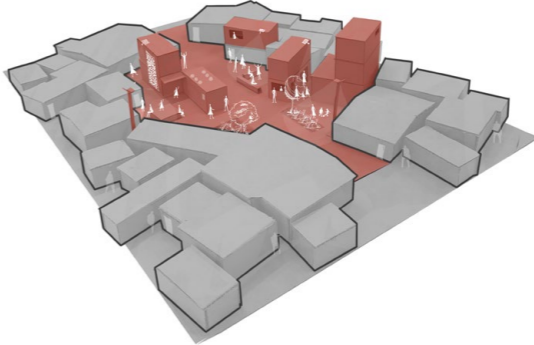
Design Implementation



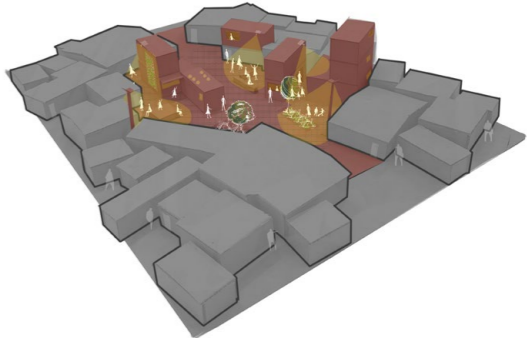
- 01 GATEWAY GF - sanitation & economy / walkway with bench & vegetation
- 02 INTERSECTION GF - sanitation & recycling station / paving & benches
- 03 INTERSECTION sanitation / water point / vegetation
- 04 INTERSECTION GF - church / FF - housing / sanitation / public seating
- 05 GATEWAY GF - internet cafe & store / FF - housing / community garden
- 06 GATEWAY GF - economy + sanitation / FF - housing / water point
- 07 INTERSECTION waste recycling
- 08 CANAL GARDENING privately owner self-subsistence gardens
- 09 GATEWAY recycling station / public seating
- 11 COURTYARD GF - church / educare / FF - housing / seating
- 12 CENTRE UPGRADE safe sanitation / community garden / play space
- 13 EDGE INTERACTION GF - wet waste station / FF - office / workshop / garden
- 14 WASTE STATION waste drop-off for tokens



SHORT-MID TERM INVESTMENT
TARGET MAJOR ROUTES



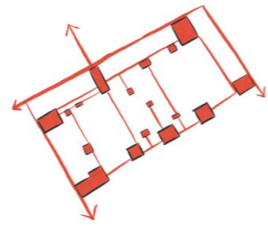
MID-LONG TERM INVESTMENT
TARGET FUTURE ENGAGEMENT



LONG TERM INVESTMENT
REINFORCE STRUCTURING

“WITH MULTI-FUNCTIONAL & SEASONAL BENEFITS”

Design Implementation

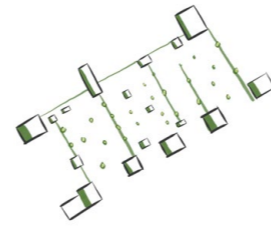


ROUTE DEVELOPMENT

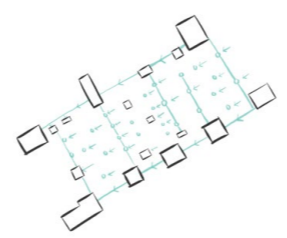
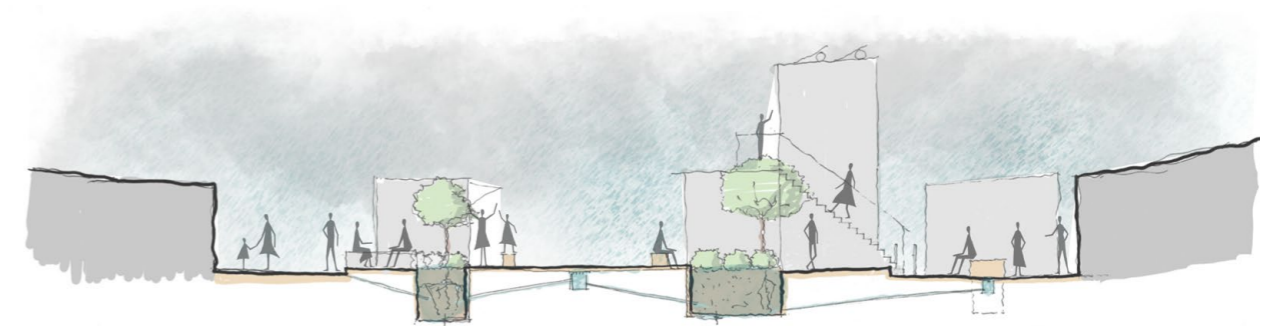
- | | | |
|----|-------------|--|
| 01 | GATEWAY | GF - sanitation & economy / FF - housing / walkway |
| 02 | GATEWAY | sanitation/ recycling hub/ waste drop off point |
| 03 | ACTIVE NODE | GF - sanitation/ FF - housing / vegetation/ wifi point |
| 04 | ACTIVE NODE | GF - sanitation/ FF - housing / vegetation |
| 05 | ACTIVE NODE | GF - educare centre / FF - house / park/ water point |
| 06 | GATEWAY | sanitation/ recycling hub/ waste drop off point |
| 07 | COURTYARD | vegetation/ wifi point/ bench / light |
| 08 | EDGE ZONE | wet waste drop off/ community garden / skills centre |
| 09 | EDGE ZONE | wet waste drop off/ community garden / skills centre |
| 10 | GATEWAY | GF - sanitation & workshop / FF - housing / courtyard |
| 11 | GATEWAY | GF - educare / FF - housing / courtyard |
| 12 | COURTYARD | GF - educare / FF - housing / courtyard |
| 13 | COURTYARD | sanitation / community garden |



PRECINCT LOCALITY



SUMMER GARDENING
COMMUNITY GREEN SPACES

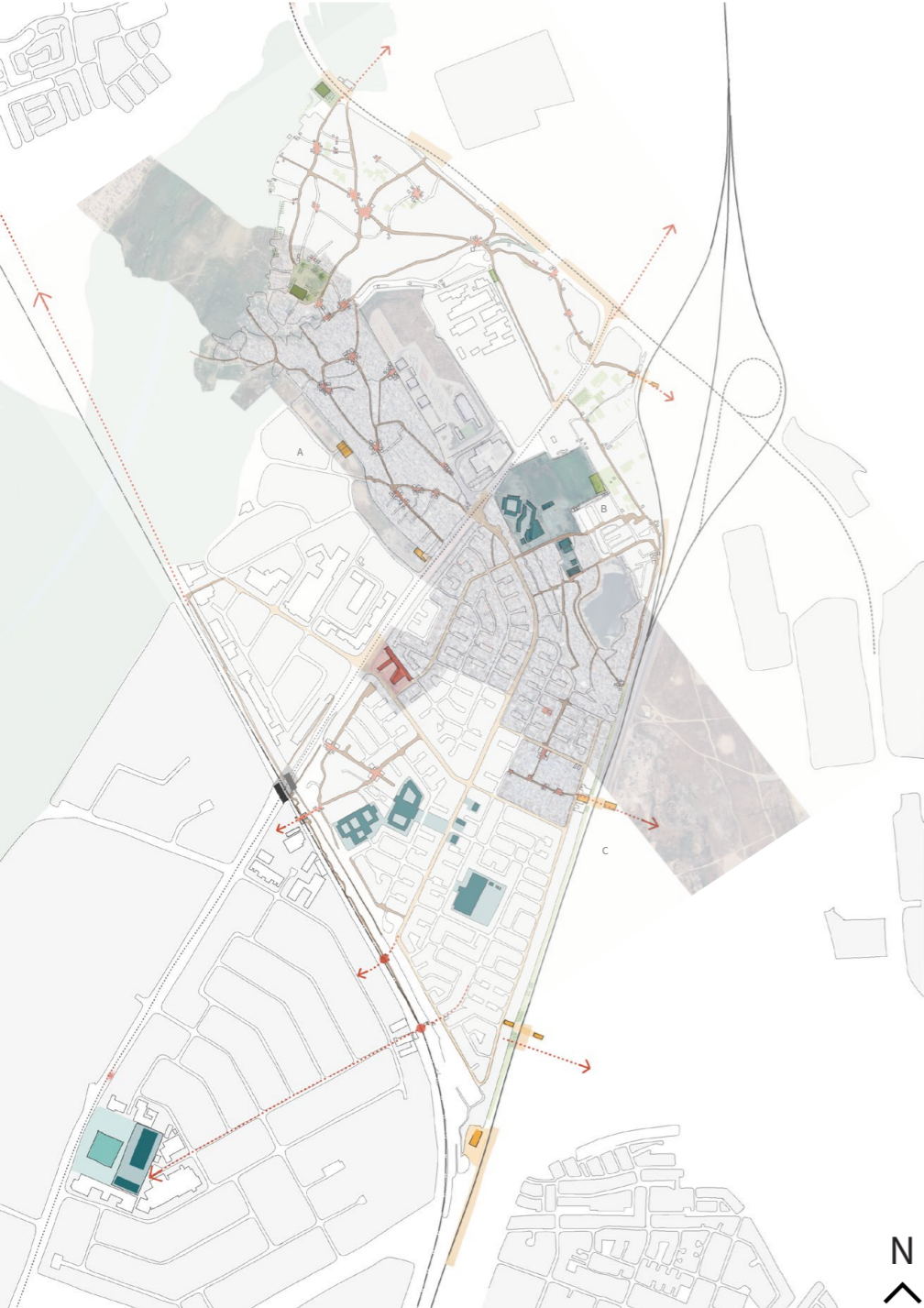


WINTER FLOOD CONTROL
RAIN COVER & STORMWATER SINKS



“TO CREATE A FRAMEWORK OF NEIGHBOURHOOD STRUCTURING”

Design Implementation



The framework created is one that implements a series of ‘bones’ and ‘joints’ to the neighbourhood of Dunoon. It offers rather than prescription and redefinition of large spaces and communities, a series of initiation points that act as the catalysts for greater change as the neighbourhood needs. It is a framework that equips users in the absence of state presence while simultaneously offering ways for the state to extend its reach beyond its current ability.

Beginning within, it seeks to address the concerns of the immediate moment, offering quickly implementable and scalable strategies that alleviate current pressures while building up a long-term mindset. By applying these measures to the ‘edges’ of the neighbourhood, the progression of the urban fabric is re-imagined and shifted from its current ‘uncontrolled horizontal sprawl’ to a collection of vertical expansion points, responsive nodes, protected land and celebrated transition zones enabling Dunoon to connect safely and sustainability with its surrounding neighbours both present and future.

“THAT REMAINS GROUNDED IN CONTEXT”

Design Implementation

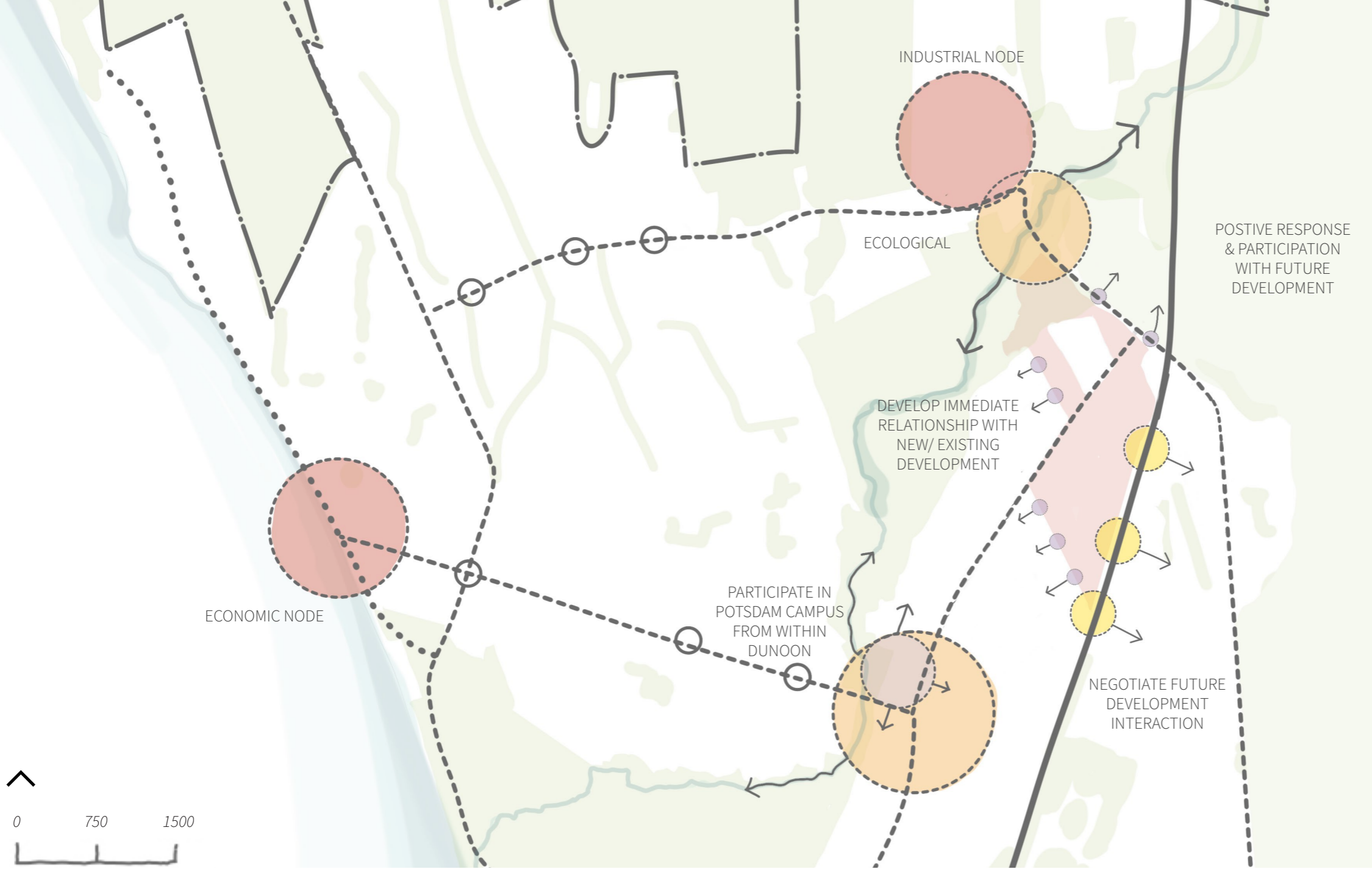


EXPLORATION OF FRAMEWORK IMPLEMENTATION FOR INVESTIGATION PRECINCT

The implementation of the various interventions reveals spaces that have needed more investment, showing a busier zone than planned or already successful spaces in Dunoon. What also becomes visible is how Dunoon then begins to react to its outer edges that are anticipating future development, proposing subtle ways of maintaining interaction with future edges.

“TO PROMOTE A CHANGE”

Conclusion



The greater scale impact of a collection of small interventions is that Dunoon can be ever-shifting towards a safer, more inclusive urban fabric which begins to enable its negotiation with existing surrounding neighbourhoods and future development. It also allows Dunoon to participate, at a scale within its capacity, in larger projects tied to the district, not just itself as a neighbourhood. For instance, the Potsdam Sustainability Campus also looks at protection of Diepriver Wetland Corridor within its aims. Dunoon is able to facilitate the beginnings of this protection from further North allowing outward involvement from within. While the Potsdam Sustainability Campus has not yet been realized, it can begin to initiate itself through Dunoon in the present while facilitating smooth development and assured Dunoon resident participation and buy-in in the future.

By setting Dunoon up for more than being a recipient of temporary service and stop-gap measures, to being a active participant and contributor to its own residents, the surrounding industrial areas and also the surrounding residential areas, there is great potential for its success and participation in the developing economic and industrial nodes in the future.

“IN HOW CITIES CAN BE MADE”

Conclusion

As a final point, at the Cape Town Metropolitan scale, this approach sets Dunoon up for participation in the greater metropolitan area.

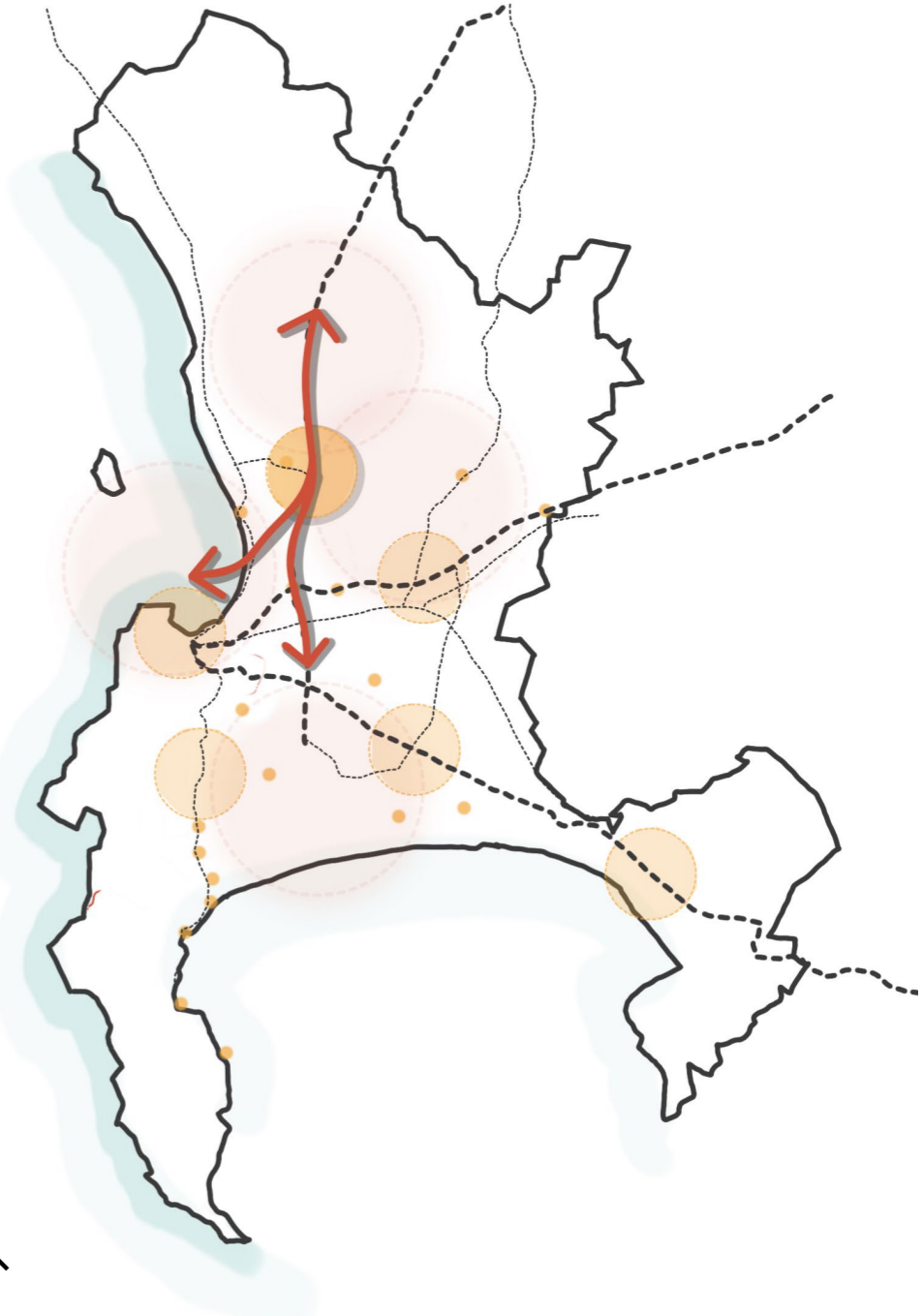
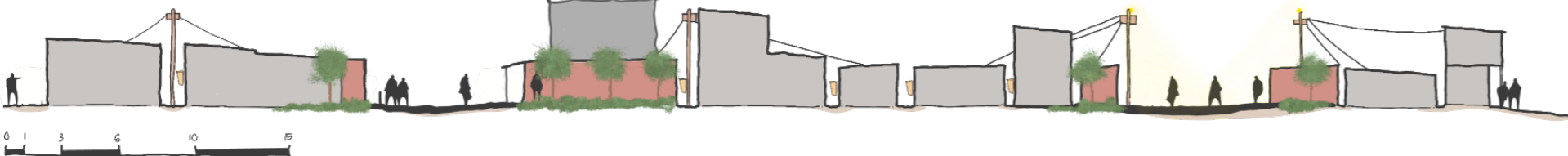
To the North, Dunoon is poised to determine an urban character and edge that develops towards the Atlantis neighbourhood. By offering new ways to see, acknowledge and engage with the self-building processes in Dunoon, the edge that develops is one that can support and respond to the realities of Dunoon taking into account key needs for the neighbourhood. This aims to promote a series of positive relationships between Dunoon and anticipated developments which can offer long-term benefits and a model for integrated and inclusive city-making.

To the West, the Diepriver Wetland Corridor becomes protected through Dunoon, offering aid to a series of neighbourhoods, fauna and flora species along the extents. Furthermore, the water quality that flows into the Atlantic Ocean is clean and offers no threat to the beach front or water species.

To the South, the model that re-imagines service provision through neighbourhood structuring is one that can be implemented across other complex urban environments

as well. Using the catalogue of spatial and ownership strategies, neighbourhood frameworks can be developed for each context as a point of initiation for future input.

Lastly, returning to the question of interventions that can begin to re-imagine the way in which service provision, access and the public realm are dealt with in complex urban environments in Dunoon, it becomes clear that new ways of thinking offer opportunity to change the spatial implications associated with self-building practices and rapid urbanization. By altering the trajectory of illegal building practices that limit state ability to intervene; positive, safe environments can be built and upgraded, opening the floor for state involvement in previously unreachable vulnerable areas. This could change the cycle of rapid urbanization that leads to an insufficient urban condition and limited access to a cycle of increasing access incrementally, producing a stable urban condition which begins to actively and successfully compete with urbanization. Neighbourhood structuring and co-planning where state and user negotiate constantly holds the prospect to re-imagine what our South African cities can look like in the future.



Ethical Considerations

Reflection

Taking lead from Denis Cosgrove, I was inspired to view my research investigation, approach and representation, through his critiques of visual approaches and methodologies. “*Geography and Vision: Seeing, Imagining and Representing the World*” by Denis Cosgrove, highlights the impossibility of complete objectivity in even the most empirical data, again bring to light the very moment the researcher asks: what do I include? What do I leave out? And equally important: How to I show what I want to show? Cosgrove, D. (2008).

I acknowledge my own susceptibility to these critiques. My work has had a defined interest which in turn informed what I chose to see, remember, speak to and display. This inevitably meant that there are things that are ‘left off the map’ for the sake of conciseness in my work. I would like to impress that despite visual or written absence, what is not shown is as important as what is. The urban is not isolated, systems of everyday activity are not isolated, and neither are the topics concerned in my work. Through what I have investigated, what I chose to consider, what I chose to represent and how I chose to represent it, I recognize my role and responsibility through the following points.

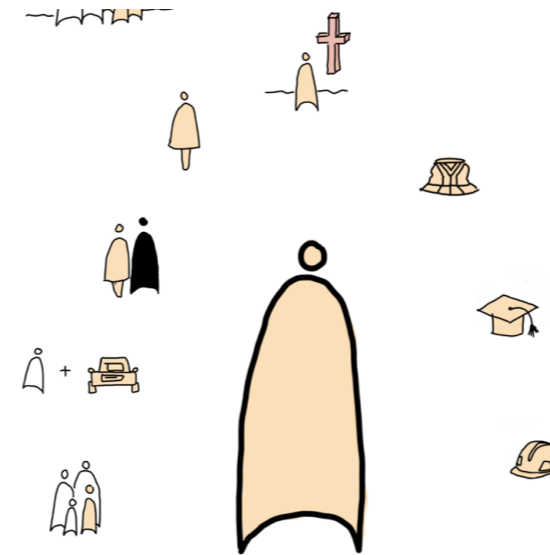
First, I acknowledge my position within my research. Building off work by both Bourke (2014) and Johnson (2001), who both speak to the influence of power relations whether in their work (Bourke, 2014) or in everyday society (Johnson, 2001), I acknowledge both my power and privilege in this paper and in my work. I also acknowledge that my privilege, through educational access, racial classification and economic position, allows me a stronger stance in certain power structures that may arise through different moments in varying environments

over the course of my research. To this, I have endeavoured a sensitivity that sought to avoid perpetuating these power relations in a manner which would negatively affect my research or that would adversely affect volunteering research participants.

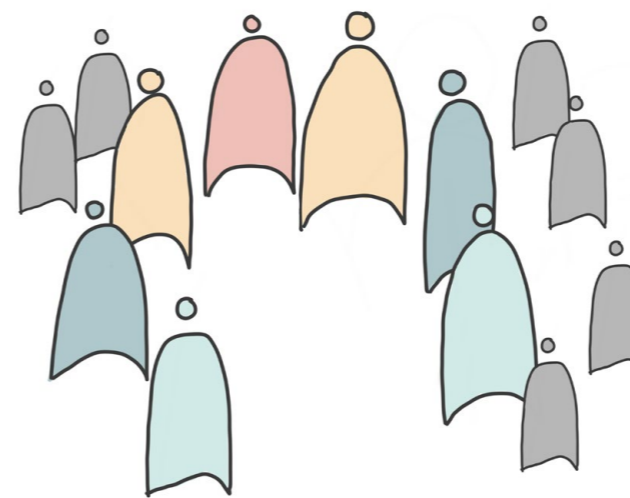
Building on this, I also recognize my position within this context which brings me to my second point. I acknowledge the sensitivity of any context in South Africa with the reminder of its apartheid history. There is no place or person untouched by its legacy and this was carried mindfully through my work. It required me to be sensitive in speech, action and representation of my work.

Thirdly, I acknowledge that I do not work in isolation. As a participant in the field of Urban Design, the industry of the built environment and as a young professional, I am aware that my research should contribute and build on existing bodies of knowledge. My responsibility is towards the growth and development of the existing academic dialogue. My work cannot stand alone, nor should it. I have therefore endeavoured to keep my work in conversation with respected and recognized scholars in this field and those adjacent. I have also endeavoured to remain transparent in all my work with my supervisor, peers and colleagues to invite constructive criticism for the integrity of the body of work which I am contributing to.

And finally, I recognize my responsibility of care towards those I choose to represent in my research. My responsibility is to recognize the situated knowledge that I am given by those who choose to share it. It is to listen to the realities and react, not to impose what I believe is necessary in the context. My responsibility in this research stands to investigate space and how it is used, not look to uncover or expose the users of these spaces for the benefit of my research or a space.

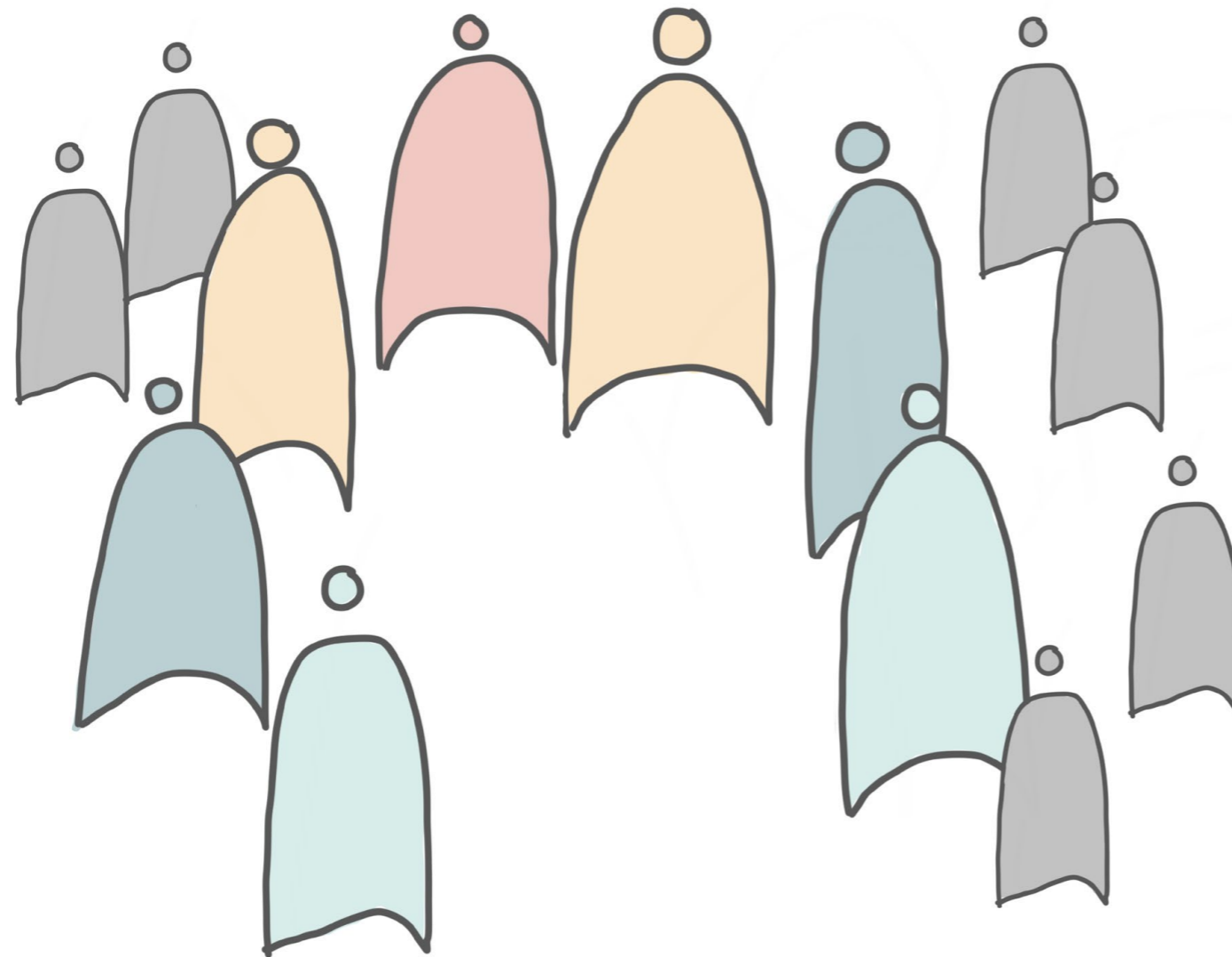


AWARENESS OF SELF WITHIN RESEARCH



AWARENESS OF OTHERS WITHIN RESEARCH

Authors own images



Acknowledgements

I would like to, first and foremost, thank my King and Saviour, Jesus Christ for opening the doors to lead me on this amazing journey. Thank you for blessing the experience and forever loving me the way you do.

Secondly, I would like to thank my husband, Khwezi Jackson. You been my partner, friend, sounding board and chef throughout the year and I cannot thank you enough for your love and support.

Thank you to Katie and Hedwig and the rest of the team for an inspiring year. I have learnt a great deal and I am so grateful to you for your energy and effort.

Finally, thank you to my family and friends. It takes a village and you're my village. Without you, I cannot have come this far.

Here's to you!

END OF THE ROAD

Thank You



Exploration of a Dunoon residents journey from home to work and back. The journey to work depicts the current reality of travel for the resident. The journey home depicts the same route but through the lens of potential through urban design intervention.

Collection of Google Maps Street View with authors editing. (Google Maps, 2024)

SWIMMERS OF THE SAME TIDE

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UNIVERSITY CONSENT

Appendices

declaration of free liscnece

I hereby grant the University free licence to reproduce the above dissertation in whole or in part, for the purpose of research.

Date Signed: 25 NOVEMBER 2024

Signature: Signed by candidate

plagarism declaration

I know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.

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Date Signed: 25 NOVEMBER 2024

Signature: Signed by candidate

ethics approval



2024/06/05
EBE/00874/2024

RE: Research Ethics Committee Project Approval Letter

Dear Lizelle Jackson,

Your application for ethics review of your project titled

Changing Lanes: Changing lives: Exploring mobility and access in Dunoon

has been reviewed and evaluated by the
Engineering & Built Environment Committee.

You may proceed with your research project titled:

Changing Lanes: Changing lives: Exploring mobility and access in Dunoon

Expiration date of approval: 2024/12/31

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) Given the propositional nature of the research, feedback to the research participants could possibly be included? If there are plans to do so already, this is not reflected in the application. Regarding informed consent, please consider adding a tick-box about approval of photos or videos being taken, but if this is not applicable, please disregard this note.

Regards,

Engineering & Built Environment Committee.

Response to additional conditions:

(ia) The nature of the two interviews varied, one of which was a guided session through Dunoon. Conversation was not recorded. The other interview summary is attached to the interviewees consent form.

(ib) No photos or videos were taken for the research that included the interviewees.

PARTICIPANT INFORMED CONSENT

Appendices

INFORMED CONSENT FORM

Dear participant,
 Thank you for your interest in participating in my research project. Before signing this consent form, I ask that you please read through the information below and ask any questions you may have.

Nature and purpose of research
 In my project I am looking into the transport systems that exist in Cape Town. It looks at options that are available to those who don't own cars and how they work alongside a car-dominated system. Along with that I am interested in looking at how the regular travel experience ties into the daily life of those who stay far away from their work and have a long distance to travel. I want to look at what spaces fit into the daily travel routines along these journeys and where they could better enable easy travel to these routine commuters.

Identity, institution and contact details of researcher
 I am doing this research as a student at the University of Cape Town. I belong to the faculty for the Engineering and Built Environment and I form part of the Urban Design Master's class for 2024.

My details are as follows:
 Name: Lizelle Jackson
 Contact Number: 069 824 0743
 Contact Email: PTGLIZ002@MYUCT.AC.ZA

Voluntary participation
 This is not a required exercise but a request. I would appreciate your participation and insight but you are welcome to say no to participating. With this, if there are any questions or parts of our conversation that you don't want to answer or talk about, you are welcome to let me know and then we will move on to the next question.

Confidential responses
 While your responses and our conversation will be used within the project, your identity will be kept confidential. Information specific to your life will also be left out of my work and will be adapted to not disclose your personal details. If there is anything that we discuss that you don't want shared, please let me know so that I will keep it confidential and not share it in my work.

Anonymity where appropriate
 I will keep your identity anonymous. Where I make mention of our conversation within my work, I will refer to you by a different name so that no one will know you have been a part of this research. Should my research not be well received or appreciated, then you will not be impacted.

Participants free to withdraw
 You are welcome to withdraw at any time before, during or after our conversation. If this is something you choose to do, please let me know and I will remove the information gathered during our conversation from my work. I will confirm this with you once completed.

Benefits of participation
 The benefit of your participation is that you have the opportunity to assist with broadening recorded knowledge of your neighbourhood from a residents perspective.

Translated documents
 English will be used as the bridging language between different people groups and cultures.

Thank you for your time in reading the previous page.
 If you are willing to be a participant, kindly sign your name and the date as record.

Participant Name & Signature: _____
 Date Signed: 11/7/24
 Student Name & Signature: LIZELLE J
 Date Signed: 2024/07/11

Translated documents
 English will be used as the bridging language between different people groups and cultures.

Thank you for your time in reading the previous page.
 If you are willing to be a participant, kindly sign your name and the date as record.

Participant Name & Signature: _____
 Date Signed: 07 SEPTEMBER 2024
 Student Name & Signature: LIZELLE JACKSON J
 Date Signed: 07 SEPTEMBER 2024

