

TRANSFORMATIVE LINES

PORTFOLIO DRAWINGS

HOSN HOUSSAMI



3.2 - 3.4
5.2.1 - 5.4
6.2.1 - 6.4
7.2.1 - 7.2.4
7.3.1 - 7.3.2

CONTEXT
PHYSICAL LINES [A.D.C]
INTANGIBLE LINES [C.D.C]
TRANSFORMATIVE JUNCTIONS
LINES-BASED URBAN DEVELOPMENT BRIEF

Appendix A

Transformative Lines is a PhD-by-Project comprising of a 40,000 word **Thesis** and accompanying **Project Portfolio**, submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy of London Metropolitan University in August 2025.

This document presents Appendix A of the **Transformative Lines - Project Portfolio**.

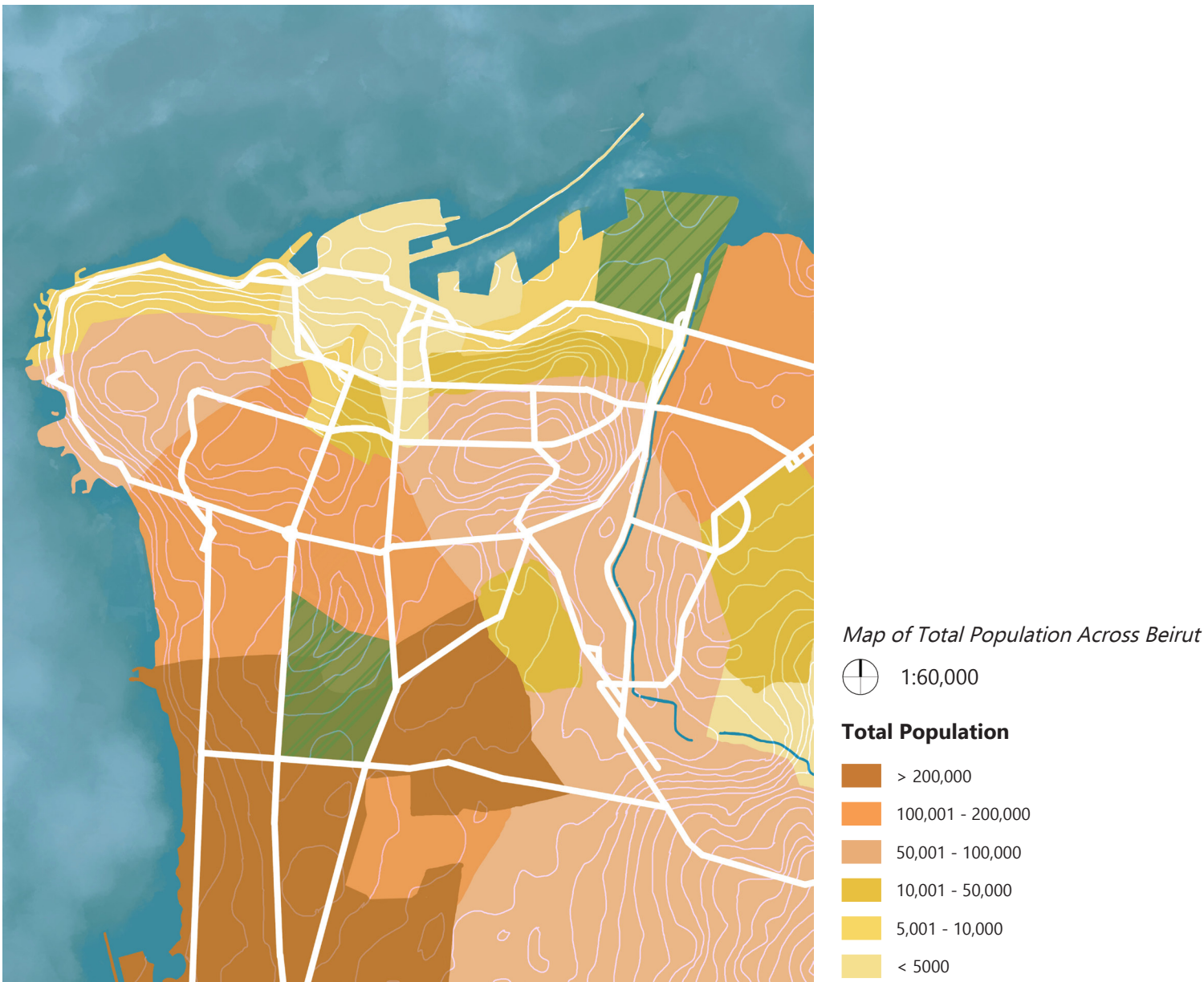
3.2 BEIRUT: THE PHOENIX CITY

Often referred to as “The Phoenix City,” Beirut, Lebanon, is characterised by resilience shaped through prolonged socio-political instability. The city is home to over 2 million residents, approximately 20% of whom are refugees.

While historically divided into East and West Beirut, this division continues to structure the city through spatial, demographic, and socio-economic variations - such as higher population densities in West Beirut.

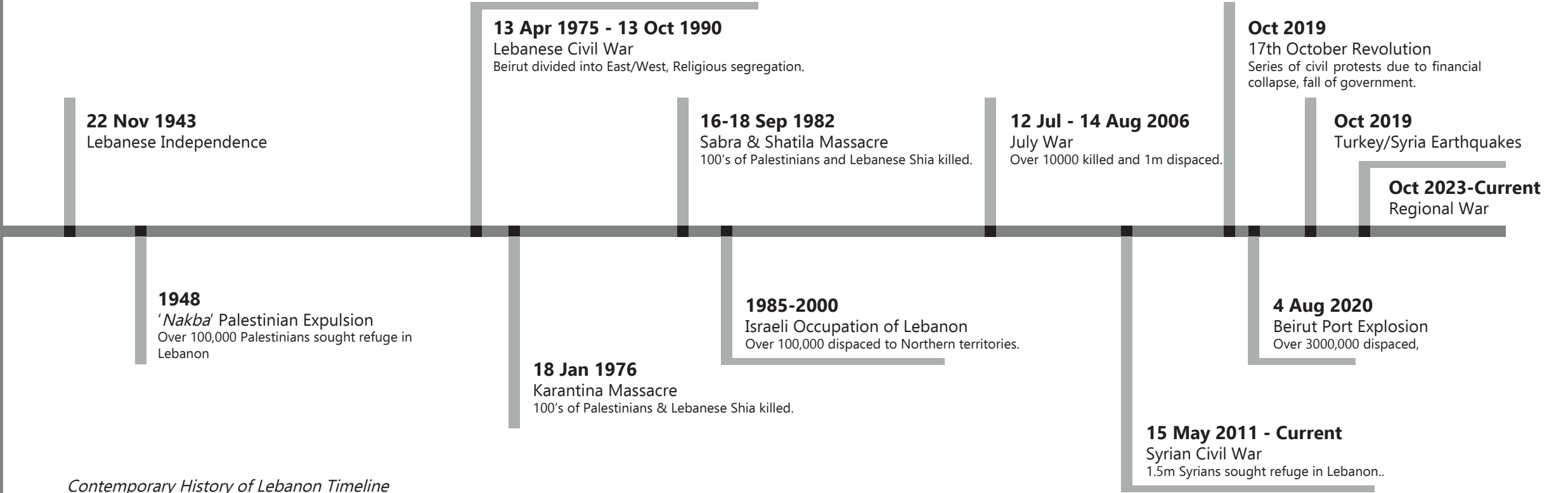
Within the *Transformative Lines* framework, such variations are understood as detectable urban lines, emerging through both spatial and social conditions. To analyse these dynamics comparatively, two neighbourhoods are examined: as notable examples of significant refugee communities, Sabra represents West Beirut, while Karantina acts as its East Beirut counterpart, revealing contrasting urban conditions.

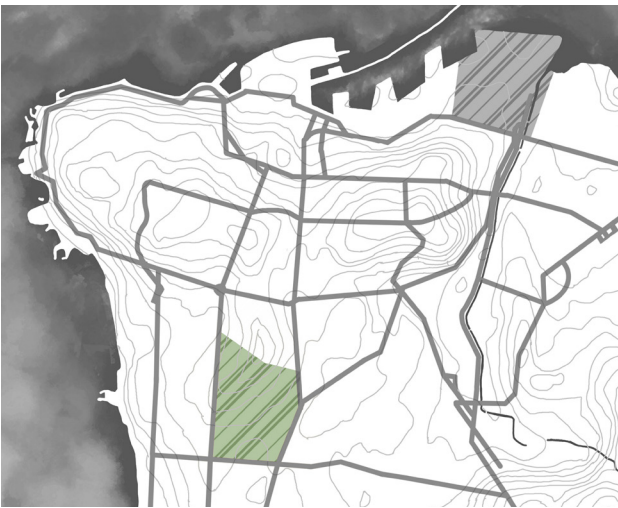
BEIRUT, LEBANON



Photograph of Beirut Cityscape

LEBANON; THE WIDER CONTEXT





Key Map of Sabra, Beirut
1:100,000

3.3 SABRA, BEIRUT

Sabra is one of the most densely populated neighbourhoods in Beirut. It contains the Sabra Souk—one of the city's most active and affordable markets—and borders the Shatila Refugee Camp (established in 1949). Together, these areas function as an interconnected spatial system often referred to as "Sabra and Shatila," with access to Shatila largely mediated through Sabra.

Architecturally, Sabra is characterised by mixed-use buildings, early 20th-century residential structures that have persisted through conflict, and dense layers of informal and formal retail. These overlapping conditions highlight complex Physical Lines shaped by adaptation, resilience, and incremental development.



Photographs from Sabra, Beirut



Sketch of Beginning of Market in Sabra, Beirut



Map of Sabra, Beirut with Formal Refugee Camps Indicated

1:4,000

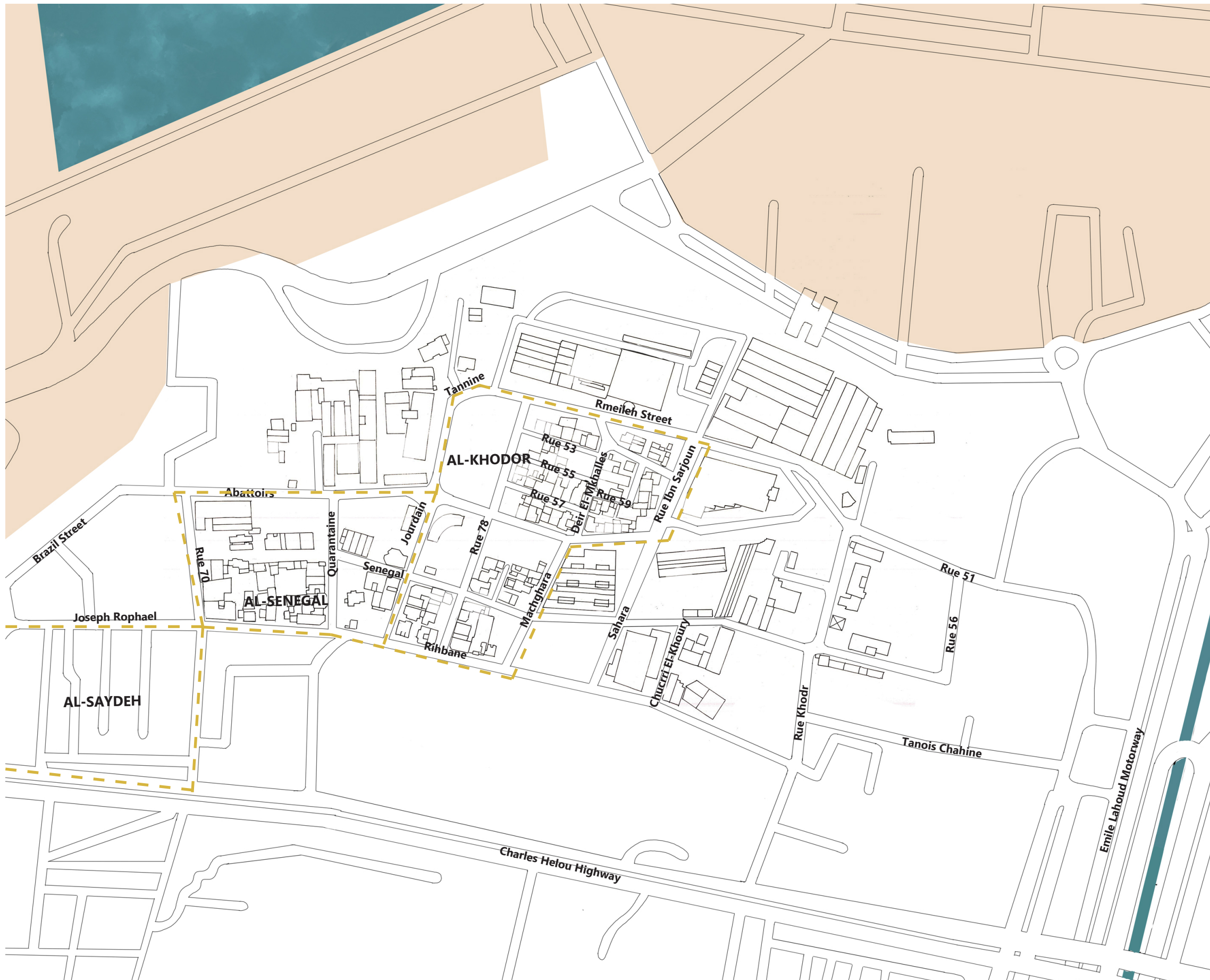
Camps



3.4 KARANTINA, BEIRUT

Karantina, located along Beirut's northern coastline, presents a contrasting spatial condition. While historically connected to the waterfront, access is now restricted by the Port of Beirut, producing a significant Boundary Line that limits public engagement with the coast.

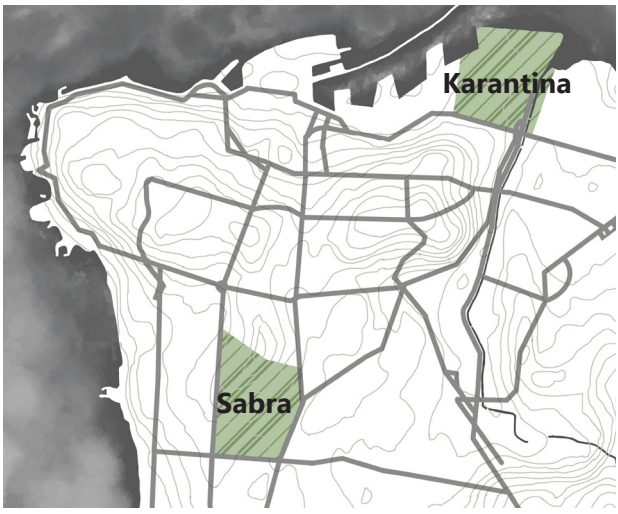
The area is predominantly industrial, with a smaller residential population. Historically, Karantina accommodated successive refugee populations - from the Armenian Genocide to the Palestinian Nakba and Syrian displacement - establishing it as a site of layered displacement and transition. These histories inform both Physical and Intangible Lines that continue to structure the neighbourhood.



Photographs from Karantina, Beirut



Sketch of Central Square in Karantina, Beirut with view of the Port of Beirut



Key Map of Sites in Beirut, Lebanon
1:100,000

5.4 PHYSICAL LINES: INTERACTION CONSOLIDATION

Physical Lines are identified through the Architectural Data Collection (A.D.C.) strategy, as outlined in the *Transformative Lines Toolkit*. They represent the primary spatial outputs of this method.

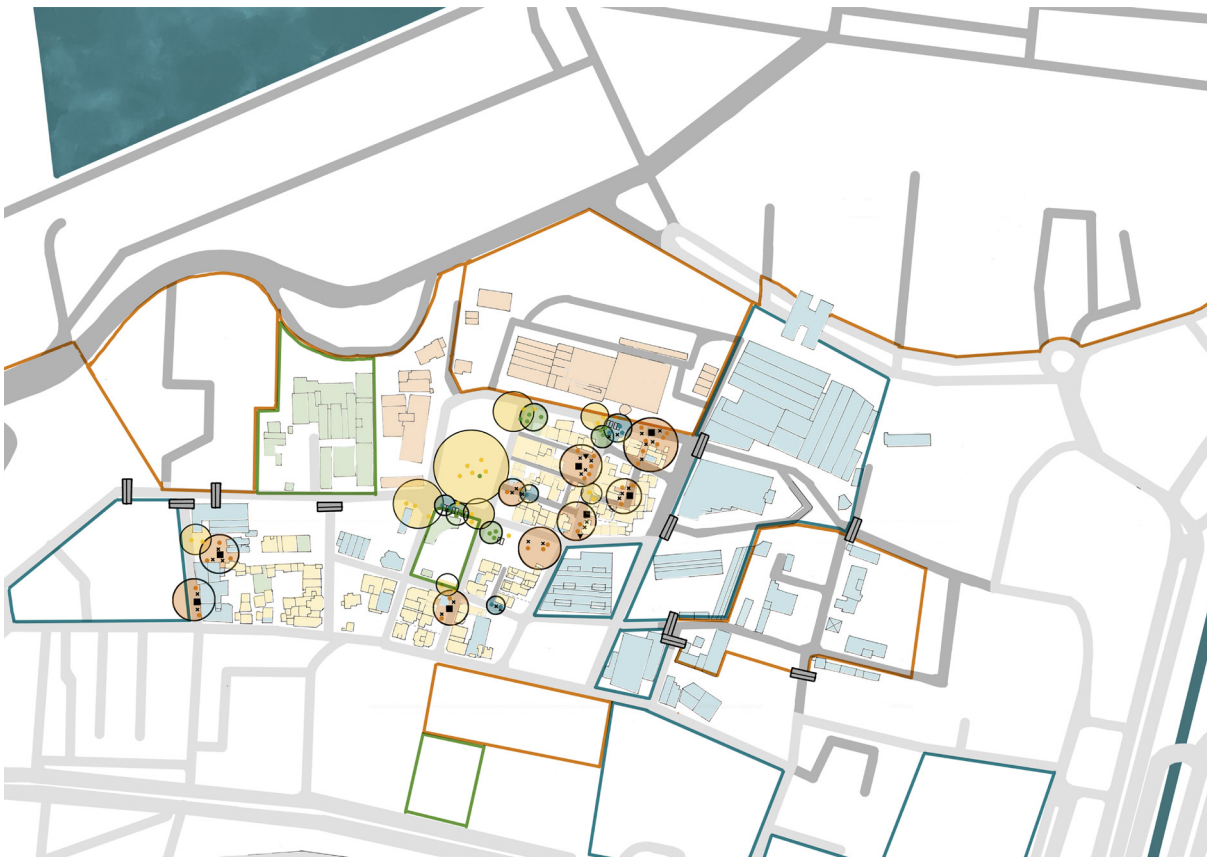
In a context such as Beirut - where rapid, unregulated development has altered much of the urban fabric - it becomes necessary to analyse both natural and human-made lines simultaneously. Rather than existing as discrete categories, these often overlap, requiring a layered analytical approach that acknowledges their interdependence.

5.2.5 NATURAL PHYSICAL LINE INTERACTIONS



Natural Physical Line Interactions in Karantina, Beirut
1:7,500

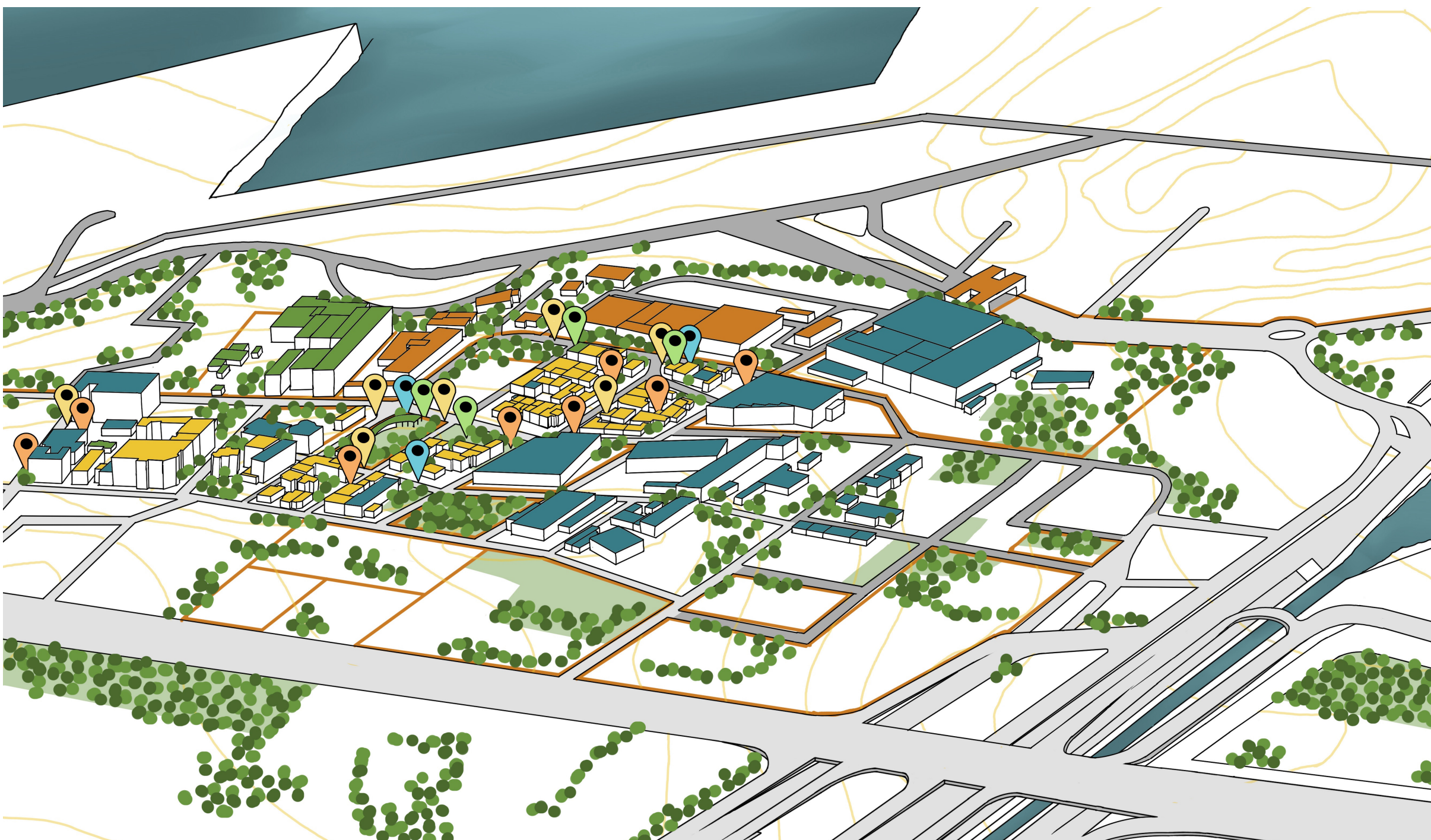
- Contour Line
- River & Coast Line
- Green Line



Human-Made Physical Line Interactions in Karantina, Beirut
1:7,500

- Structures Line
- Routes Line
- Boundaries Line
- Occupation Line

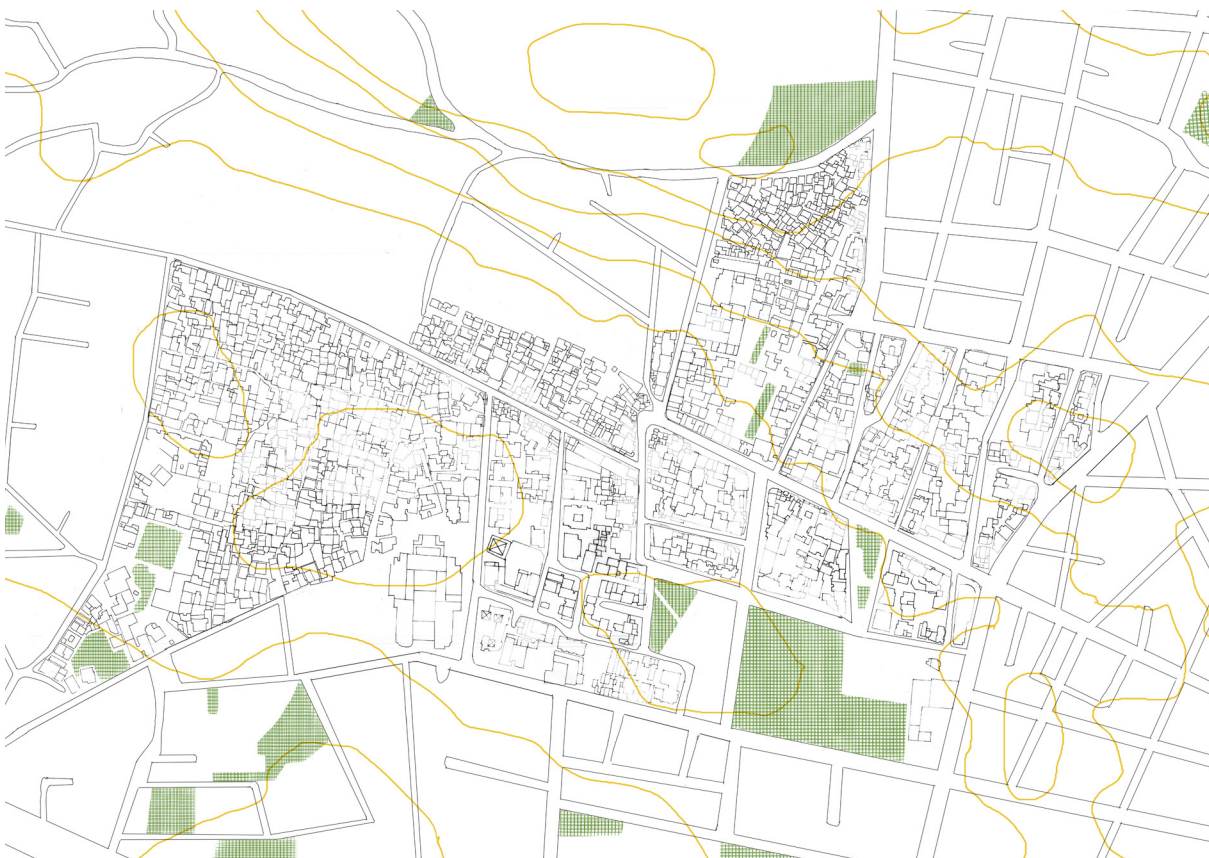
INTANGIBLE LINES: INTERACTION CONSOLIDATION



Physical Lines Planometric Map of Karantina, Beirut
1:7,500

- Contour Line
- River & Coast Line
- Green Line
- Structures Line
- Routes Line
- Boundaries Line
- Occupation Line

5.3.5 HUMAN-MADE PHYSICAL LINE INTERACTIONS



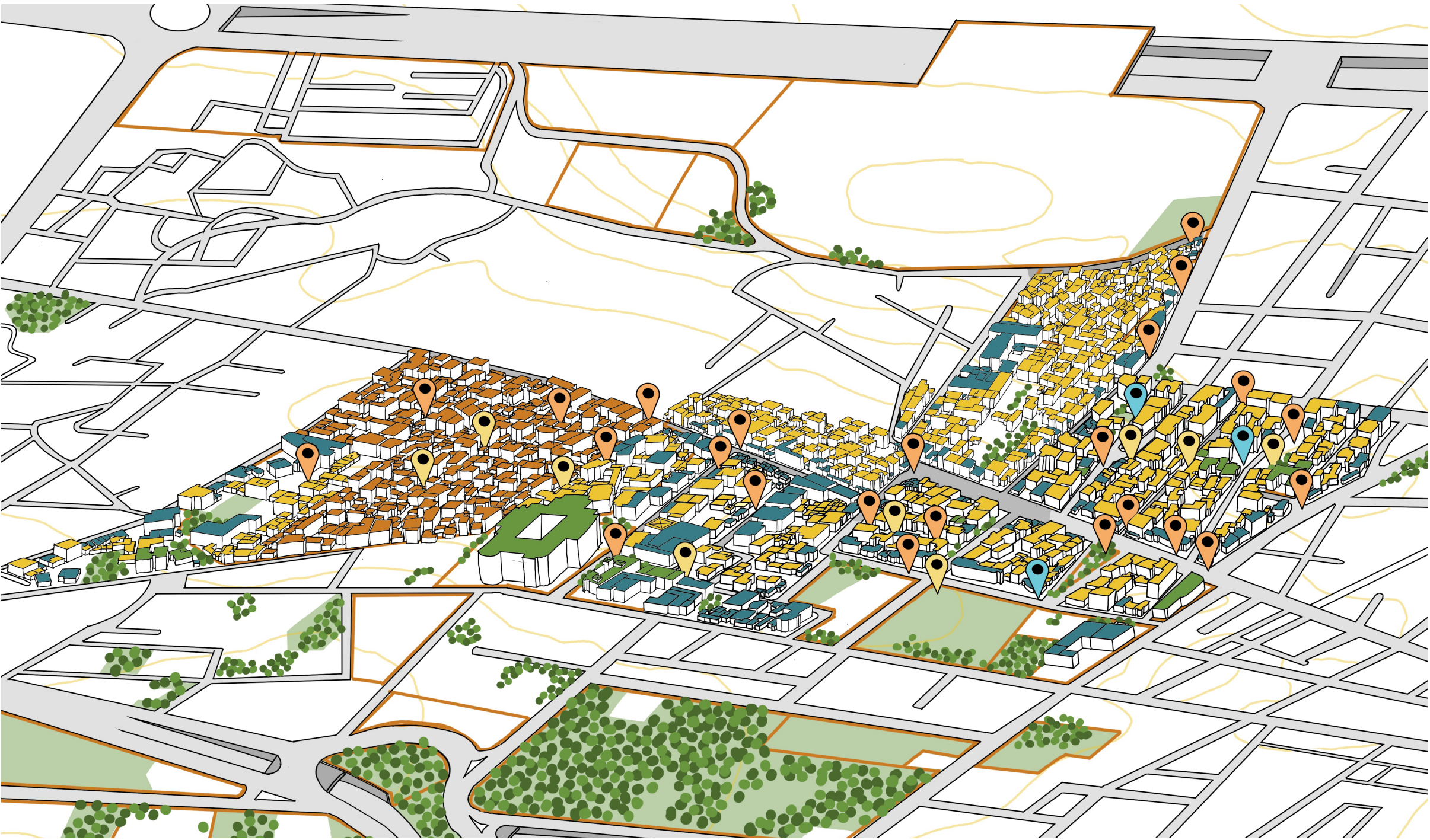
Natural Physical Line Interactions in Sabra, Beirut
1:7,500

- Contour Line
- Green Line



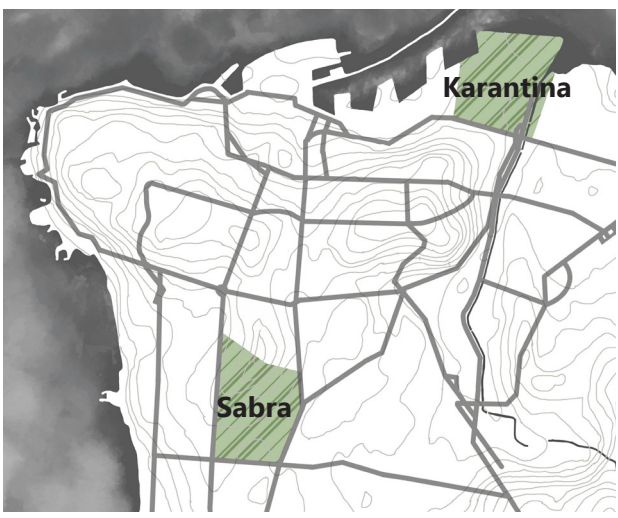
Human-Made Physical Line Interactions in Sabra, Beirut
1:7,500

- Structures Line
- Routes Line
- Boundaries Line
- Occupation Line



Physical Lines Planometric Map of Sabra, Beirut
1:7,500

- Contour Line
- Green Line
- Structures Line
- Routes Line
- Boundaries Line
- Occupation Line



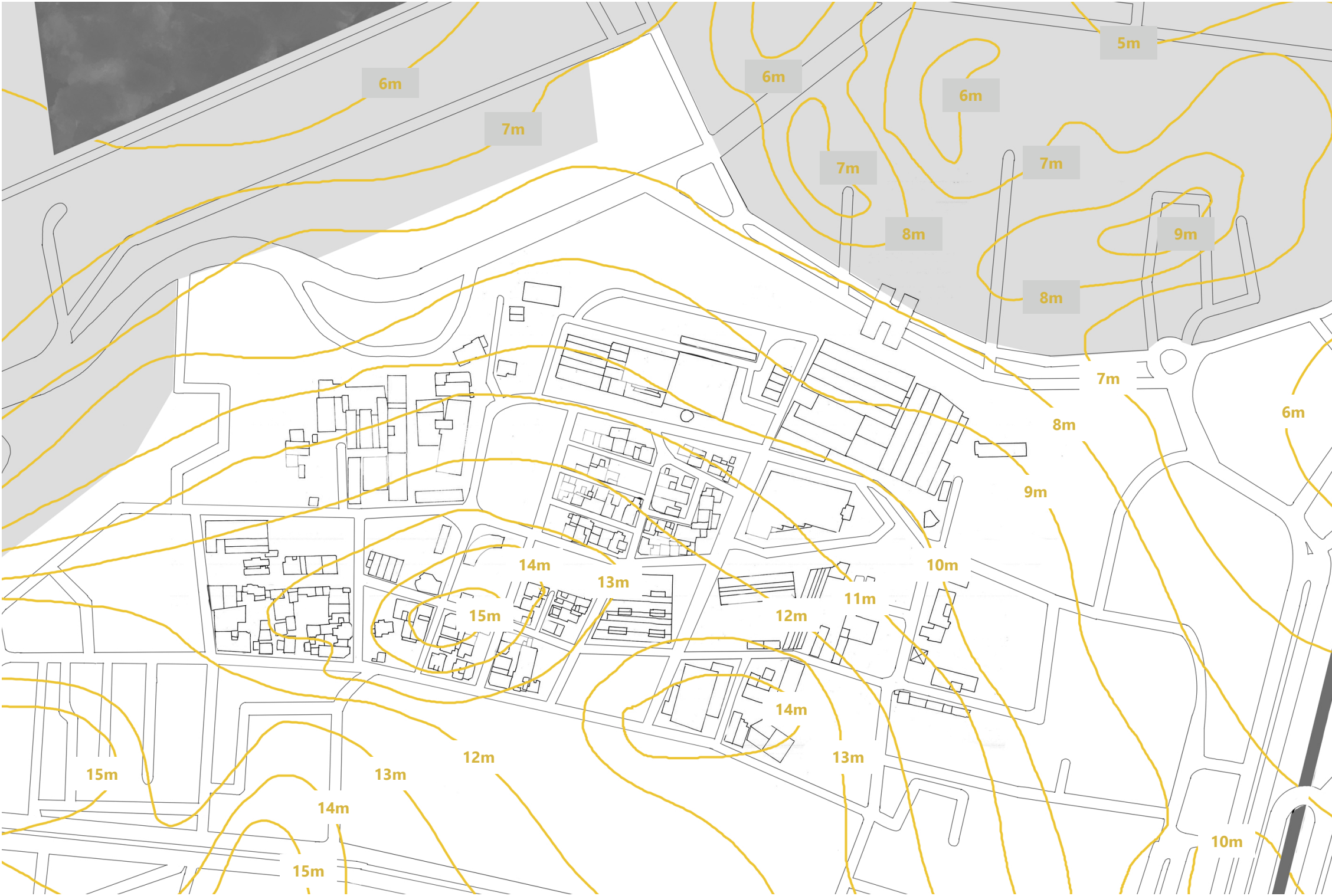
Key Map of Sites in Beirut, Lebanon
1:100,000

5.2.1 CONTOURS

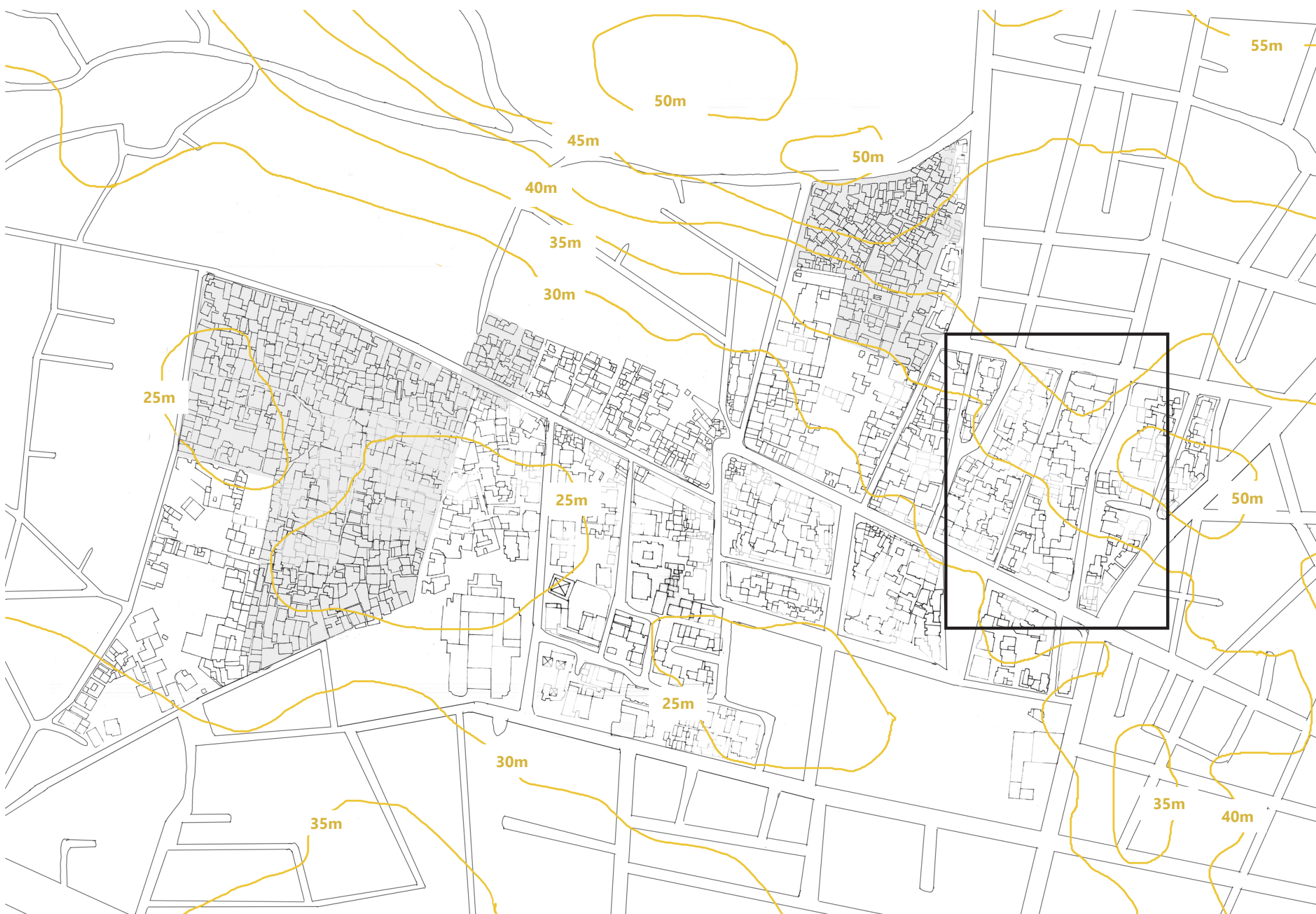
Lebanon's predominantly mountainous terrain shapes Beirut's position on a hilly peninsula, bounded by elevations such as Al-Musayib and Al-Ashrafieh.

Within this topography, Karantina presents relatively flat terrain, whereas Sabra is notably hilly. This distinction structures patterns of movement and occupation, where flatter areas in Sabra tend to support more sustained pedestrian activity, including informal social uses such as children's play. Here, topography functions not only as a Physical Line but as a condition that influences social spatial practices.

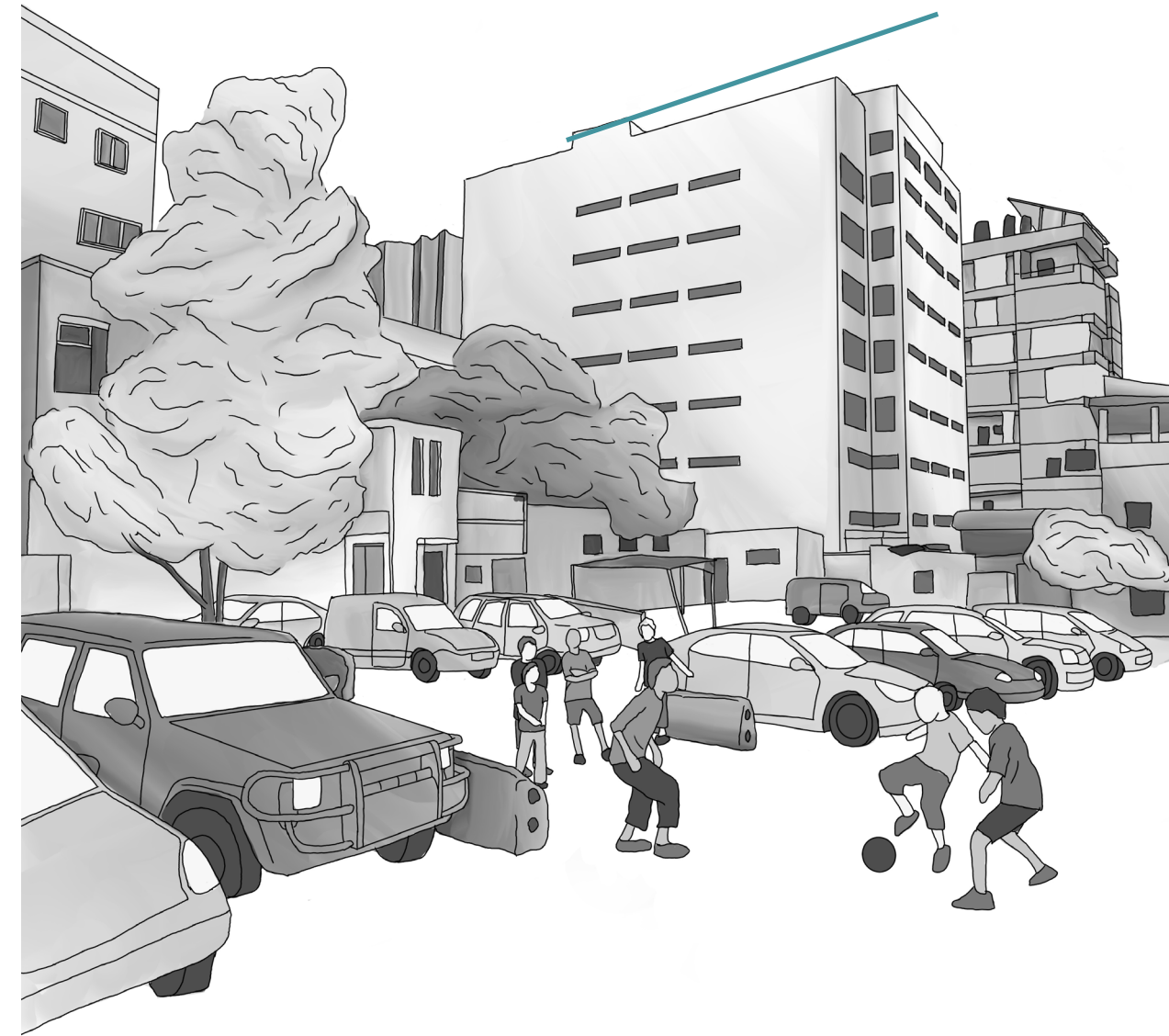
NEIGHBOURHOOD CONTOURS



Contour Line Map of Karantina, Beirut (1m intervals)
1:4,000



Contour Line Map of Sabra, Beirut with Site Zoom-In Indicated (5m intervals)
1:4,000



Sketch of Children Playing in Informal Car Park on Hasanein Street

HILLS VS TRAFFIC - A CONSIDERATION FOR PLAY



- Contour Lines
- Section Cuts
- Informal Car Park Space where Children Typically Play
- AICP School
- Schools

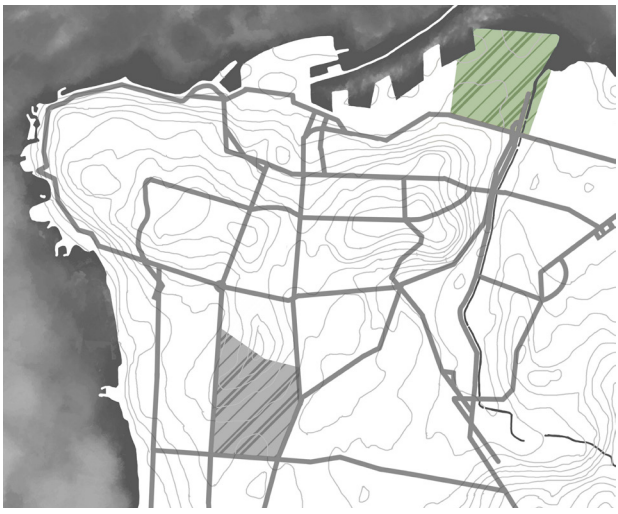
Contour Line Exploration Plan of Hasanein Street & Hittine Street in Sabra, Beirut (1m intervals)
1:1,000

Contour Line Exploration Section A-A of Hittine Street
1:1,000



Contour Line Exploration Section B-B of Hasanein Street
1:1,000





Key Map of Karantina, Beirut
⊕ 1:100,000

5.2.1/3 COAST & RIVER

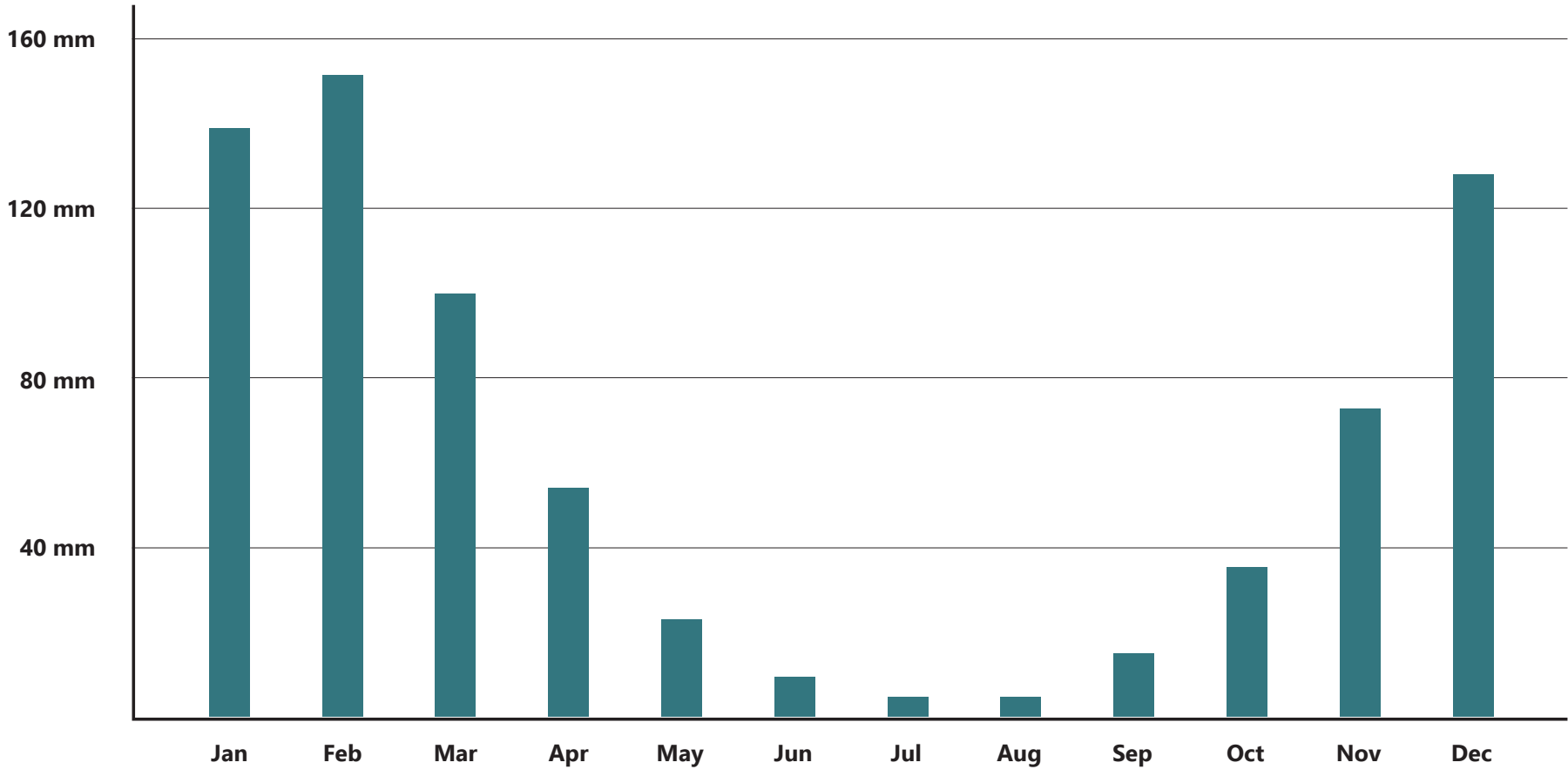
Sabra, as an inland neighbourhood, lacks direct engagement with Coast or River Lines, in contrast to Karantina, which is defined by both.

Karantina's proximity to the Beirut River produces significant infrastructural vulnerabilities. During periods of heavy rainfall, flooding transforms the River Line into a temporary Barrier Line, restricting access and isolating the neighbourhood. This demonstrates how Physical Lines can shift function under changing environmental conditions.

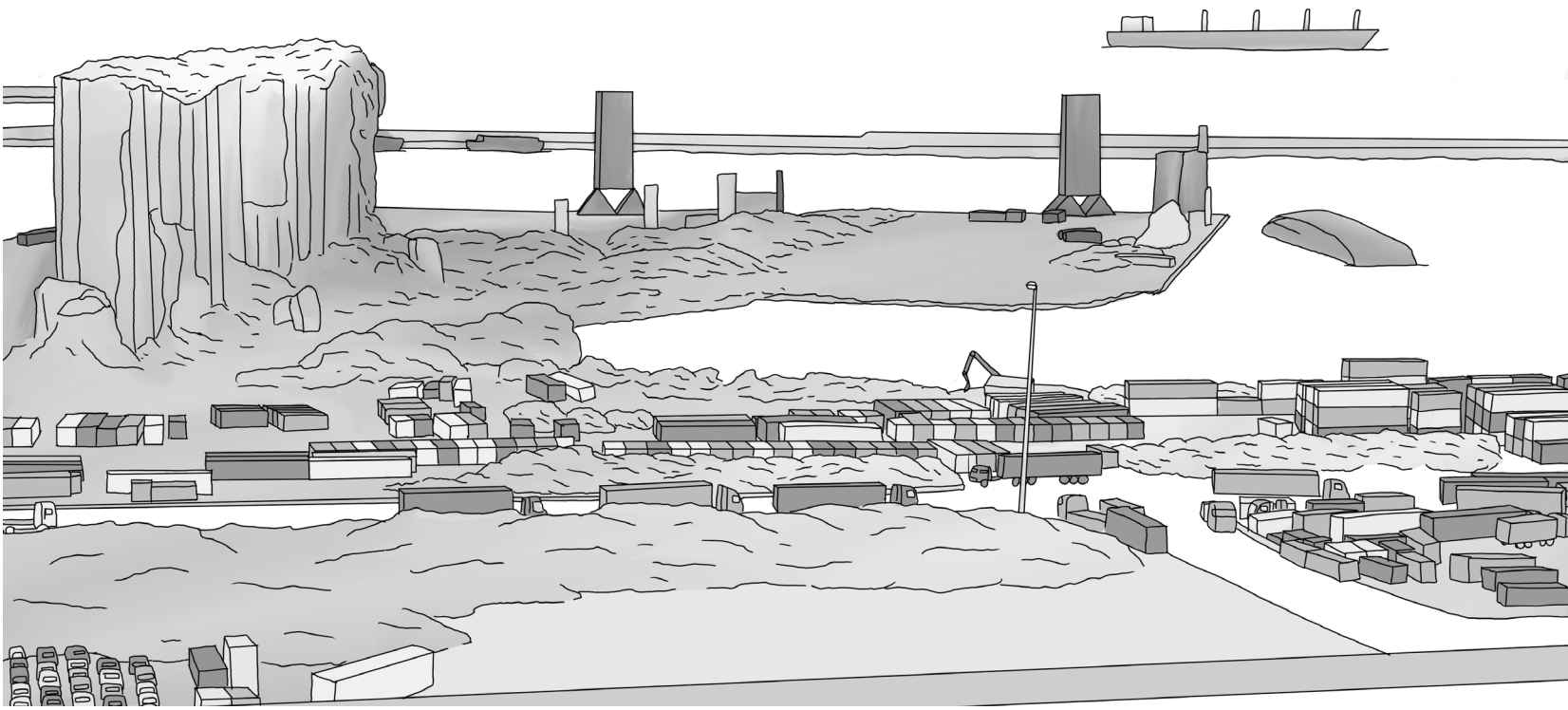
WHERE THE BEIRUT'S ONLY RIVER AND COAST MEET



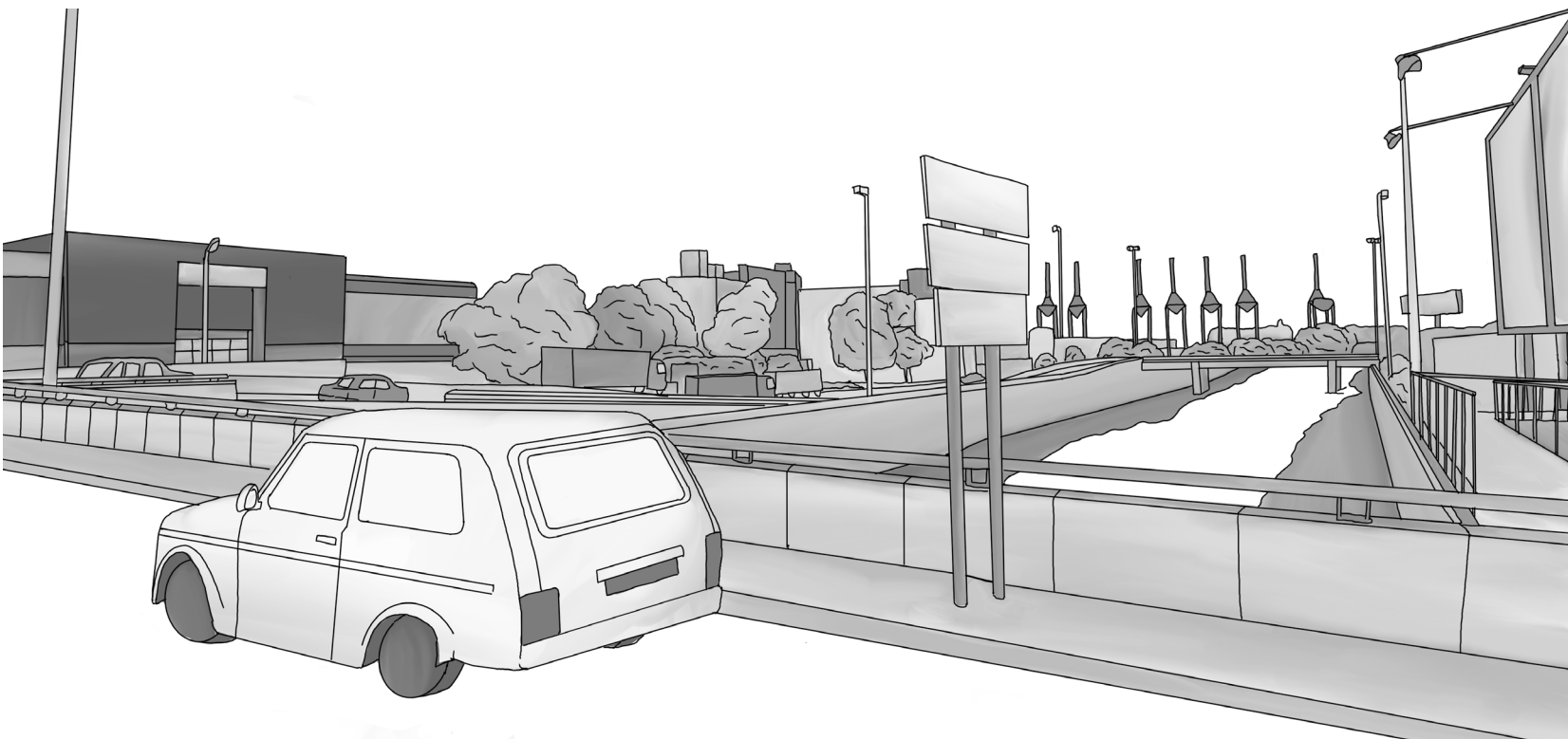
ANNUAL FLOOD RISKS



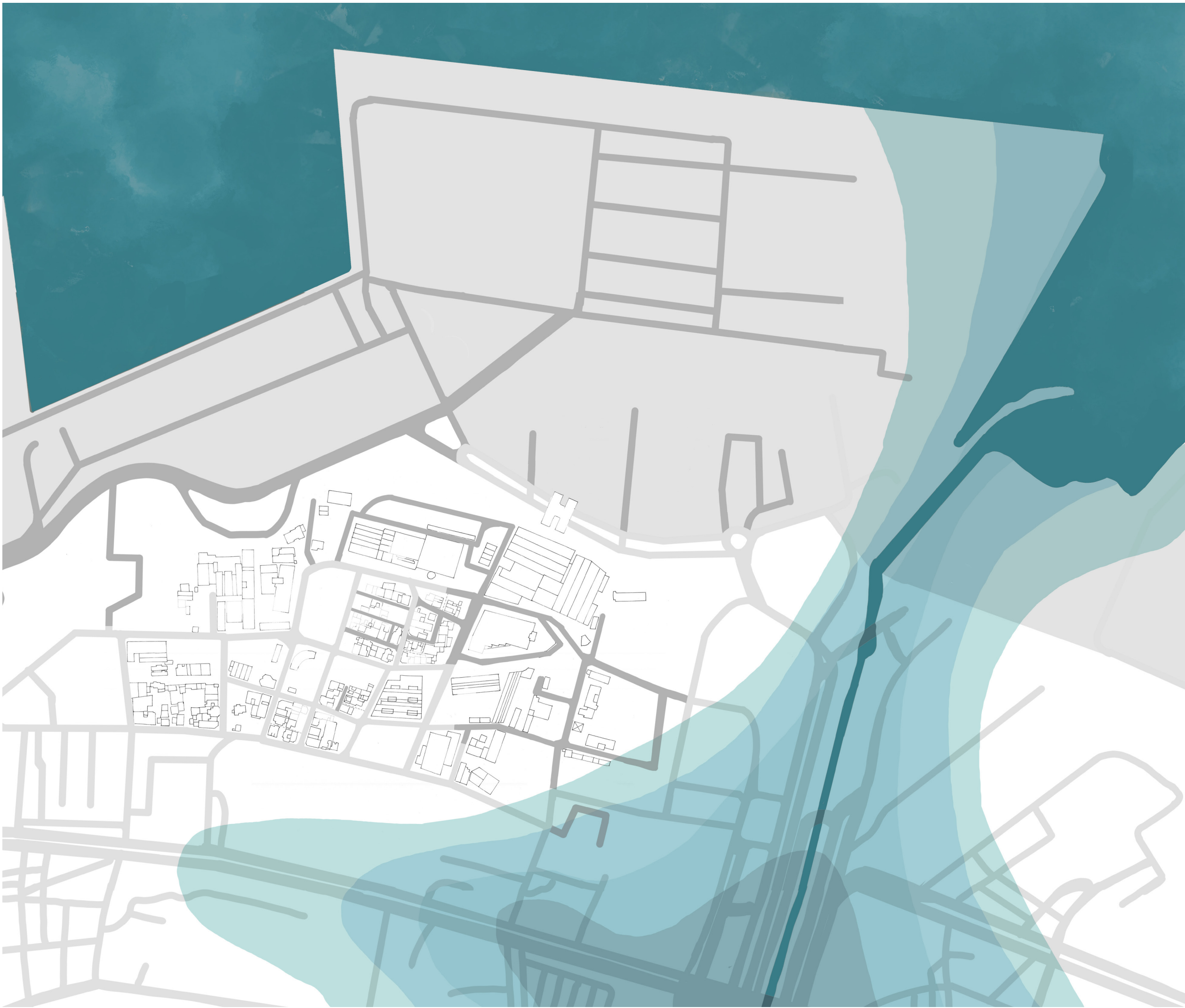
Monthly Precipitation Levels in Beirut, Lebanon



Sketch of Mediterranean Sea Coast Line with view of 2020 Port Explosion Silo, Port of Beirut



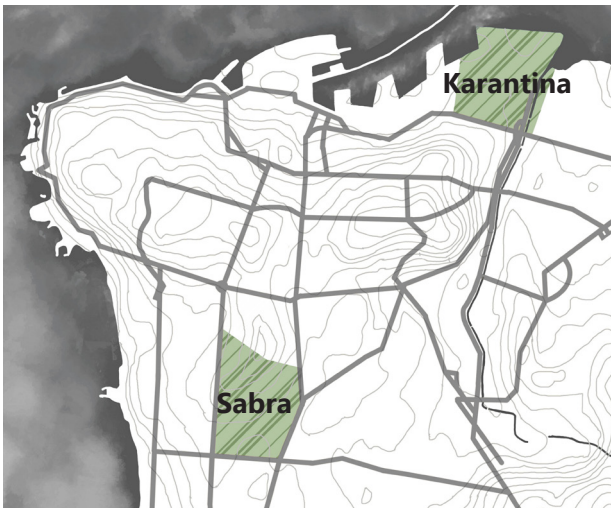
Sketch of River Line with view of Forum de Beyrouth, Karantina



Coast and River Lines Map of Karantina, Beirut with the Port of Beirut Indicated

⊕ 1:5,000

1m Flood Level 0.75m Flood Level 0.5m Flood Level 0.25m Flood Level



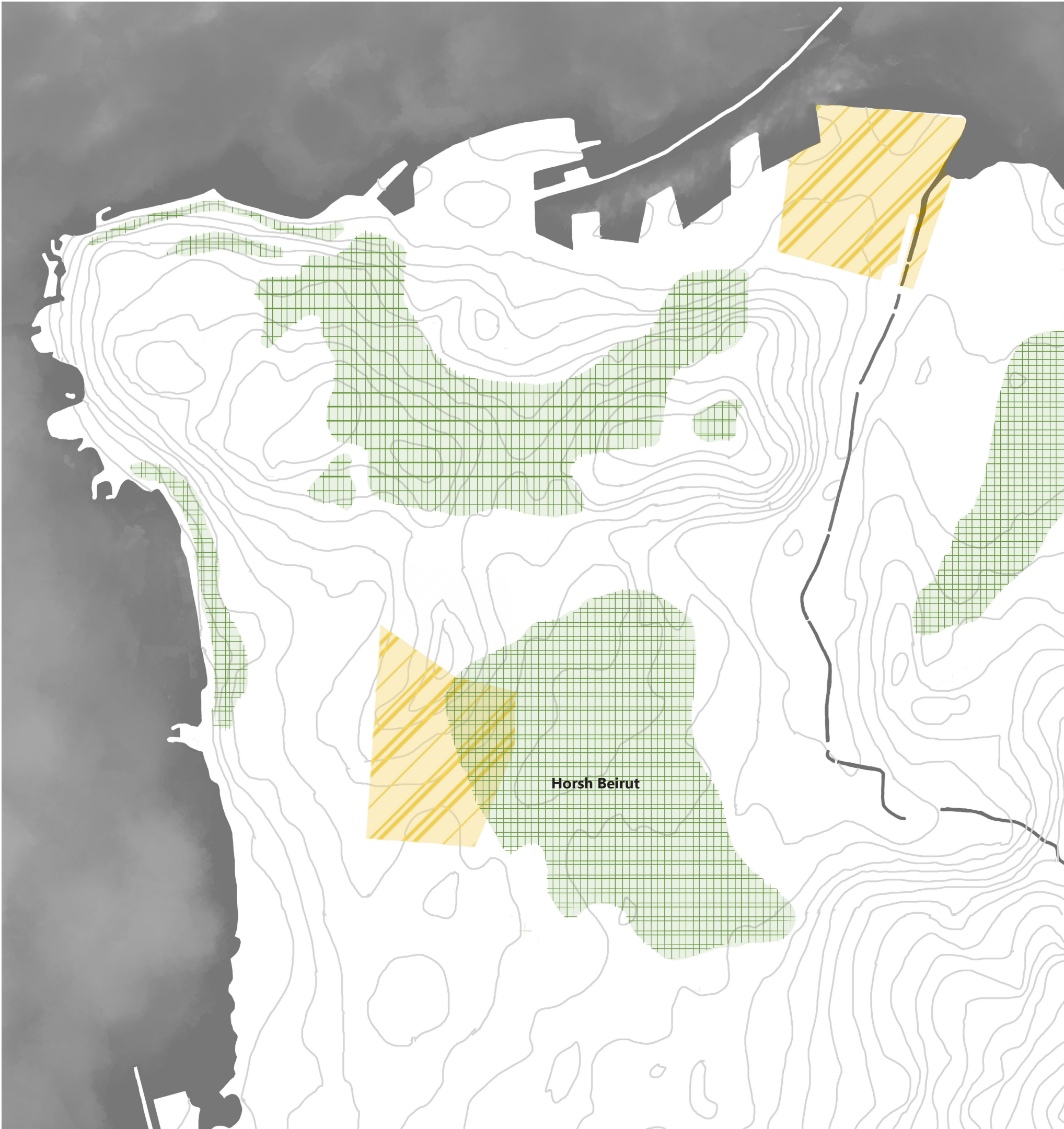
Key Map of Sites in Beirut, Lebanon
1:100,000

5.2.4 GREEN (FOREST)

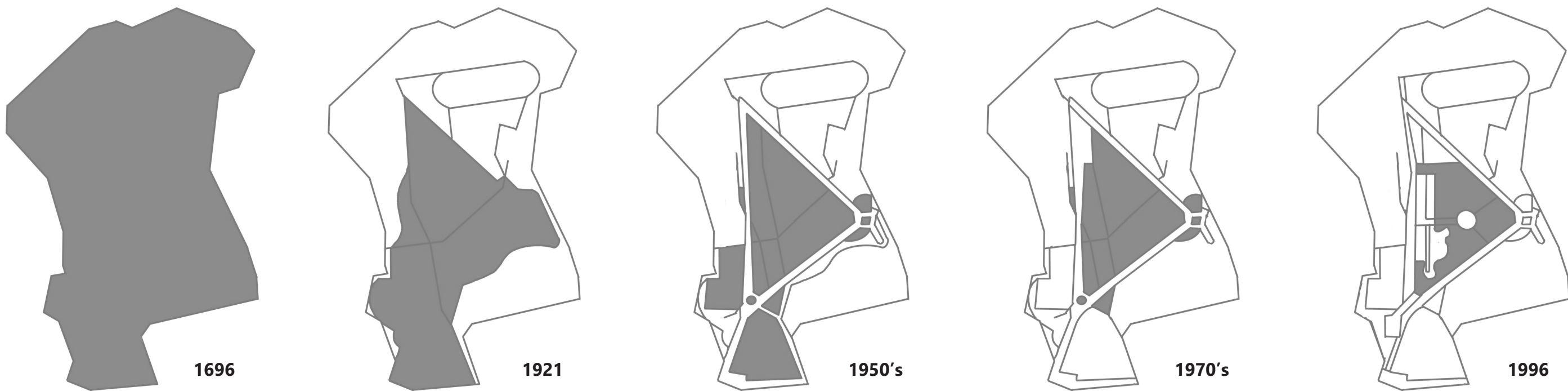
While Lebanon retains significant forested landscapes, Beirut's historic Horsh Beirut has been reduced from a dense pine forest to a managed urban park.

Given this transformation, the term "Green Line" is adopted in place of "Forest Line" to more accurately capture contemporary vegetative conditions. This term also deliberately references the historic Green Line of the Lebanese Civil War, reframing vegetation as both an ecological and political-spatial marker.

HORSH BEIRUT; 1910 - PRESENT DAY



Map of Historical Forest Line in Beirut, Lebanon (circa 1910's)
1:30,000



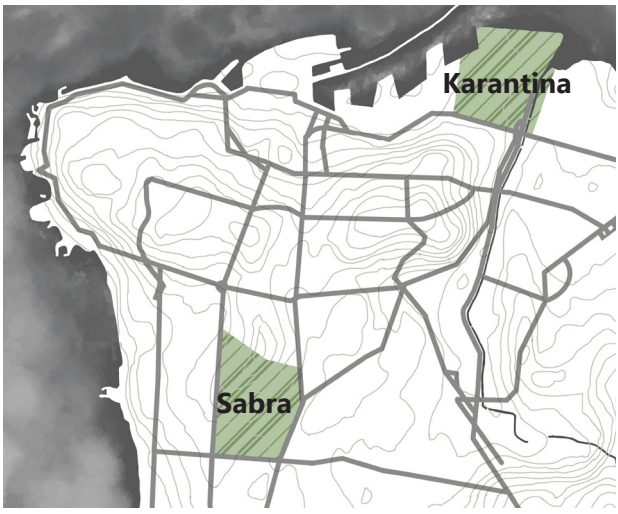
Diagrammatic Transformation the Horsh Beirut from Forest Line to Green Line (Not to Scale)

BEIRUT'S GREEN SPACES



Green Line Map of Beirut, Lebanon (present)
1:20,000

- Public Green Spaces Including:
Parks
Greenways
Cemeteries
- Private/ Access Limited Green Spaces* Including:
Parks
Greenways
Undeveloped Land
Golf Courses
Hippodrome



Key Map of Sites in Beirut, Lebanon
1:100,000

5.3.1 STRUCTURES

Urban mapping in Beirut remains inconsistent, particularly following governance instability since 2019. As a result, existing maps often fail to accurately represent current spatial conditions.

This is especially evident in informal settlements, which are frequently inaccessible and underrepresented. With nine recognised informal areas—including Shatila and Karantina—informality may constitute up to 30% of Beirut’s built environment. This absence of reliable data reinforces the necessity of situated, ground-based mapping approaches within the toolkit.

STRUCTURE TYPOLOGIES



Structures Line Use Map of Karantina, Beirut
1:4,000

- Residential Structures
- Commercial Structures
- Public Structures
- Military Structures

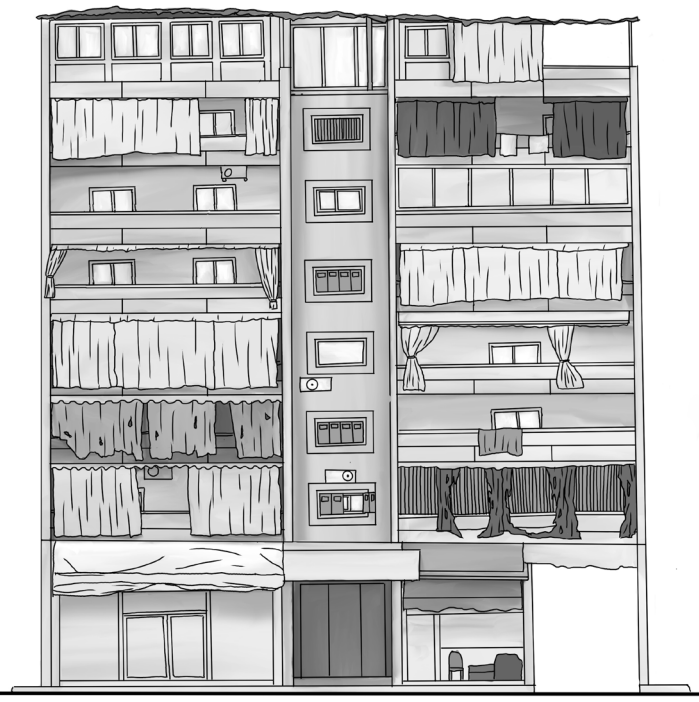


Sketch of Typical Mix-Use Structure in Karantina, Beirut



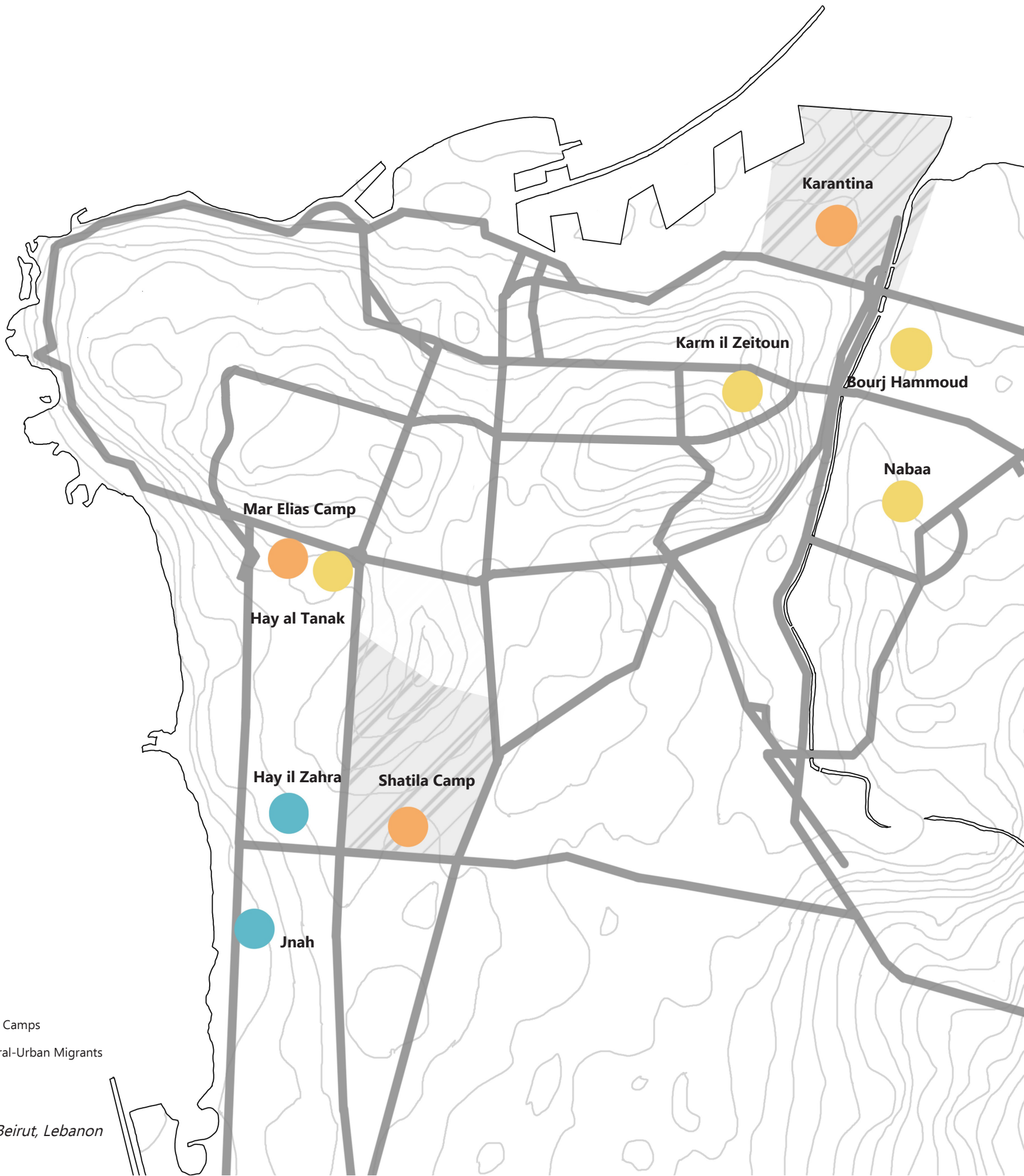
Structures Line Use Map of Sabra, Beirut
1:4,000

- Residential Structures
- Mixed-Use Structures
- Public Structures
- Shatila Structures



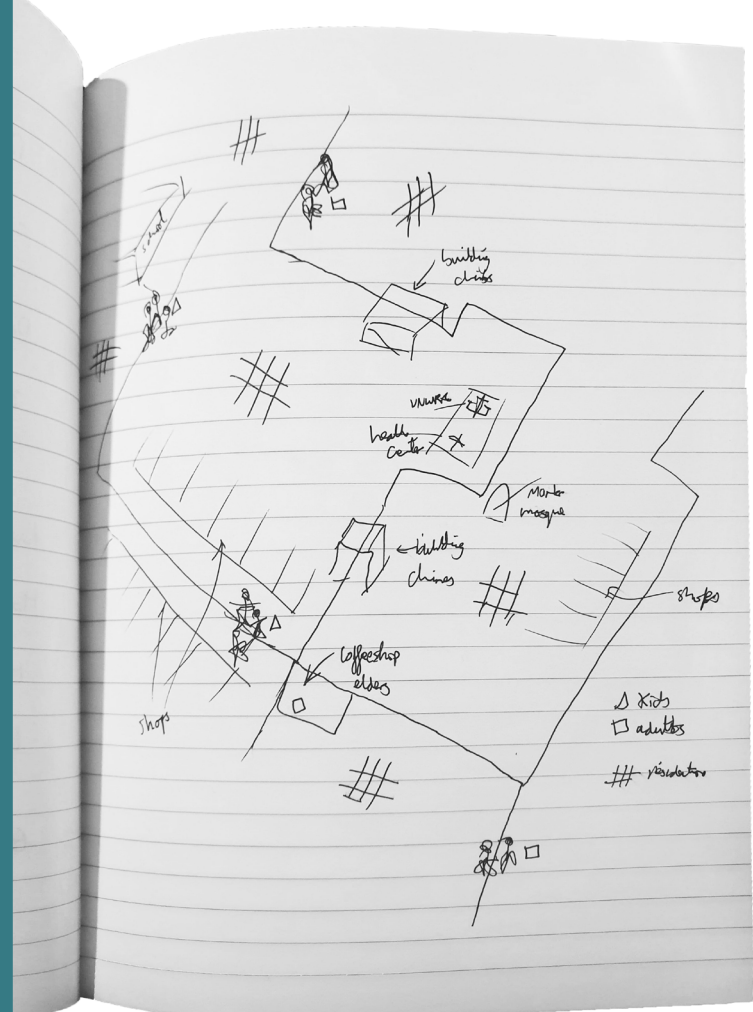
Sketch of Typical Mix-Use Structure in Sabra, Beirut

BEIRUT’S INFORMAL SETTLEMENTS



- Began as International Refugee Camps
- Began as Housing Areas for Rural-Urban Migrants
- Began as Squatter Settlements

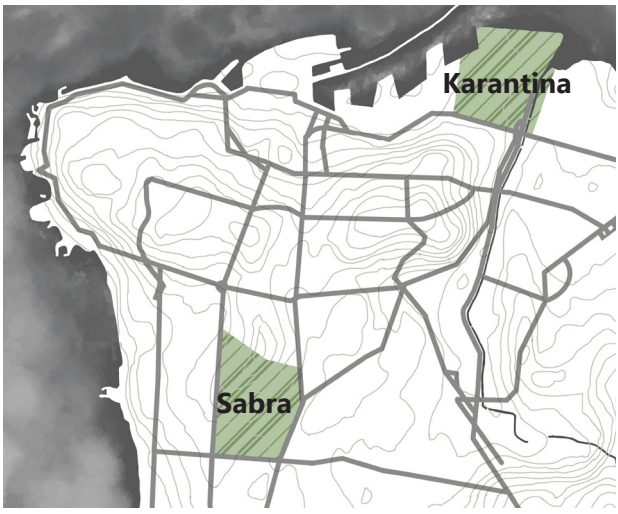
Map of Informal Settlements Beirut, Lebanon
1:50,000



Diagrammatic Sketch Produced on Tour of Shatila Camp



Photograph of Typical Shatila Camp Structures in Sabra, Beirut



Key Map of Sites in Beirut, Lebanon
1:100,000

5.3.2/3 ROUTES & BOUNDARIES

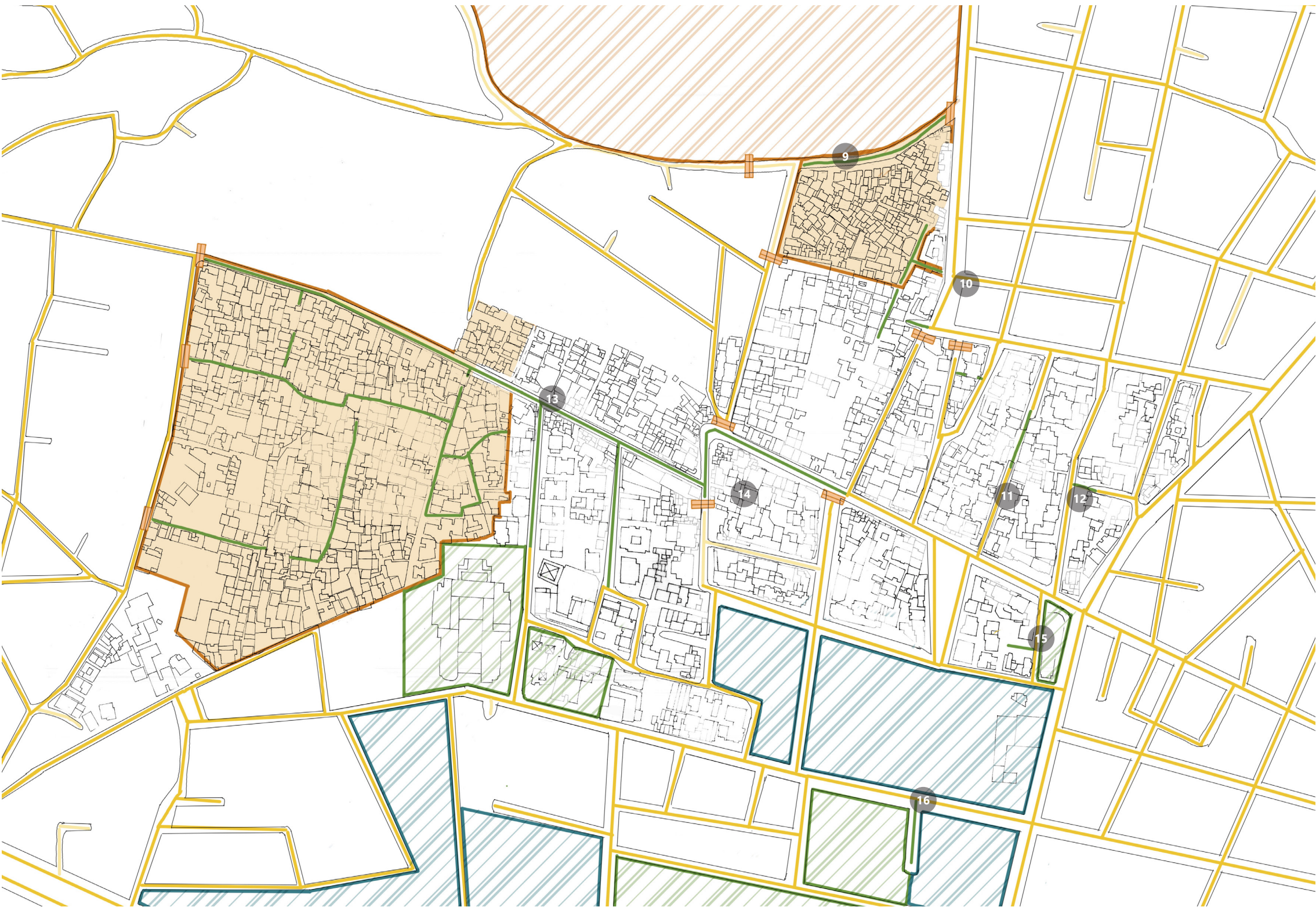
While Route Lines are generally well-documented, this research prioritises their use and perception rather than their fixed locations.

The privatisation of space introduces Boundary Lines that are not always physically visible but are socially enforced. These may manifest through signage, regulation, or lived experience, shaping perceptions of accessibility. Their representation therefore requires interpretive and abstract visualisation methods.

BORDERS WITHIN NEIGHBOURHOOD BORDERS



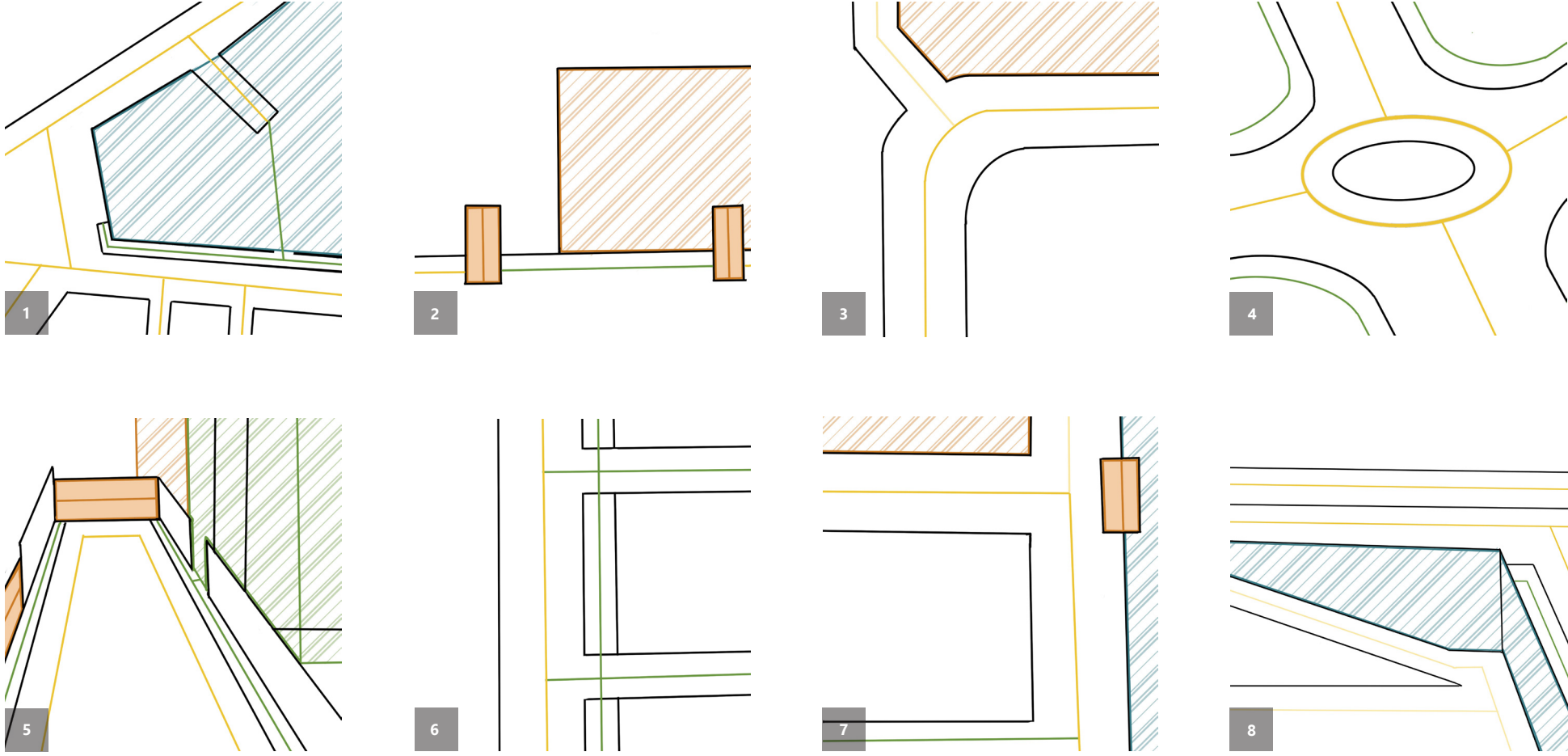
Routes & Boundries Lines Map of Karantina, Beirut
1:4,000



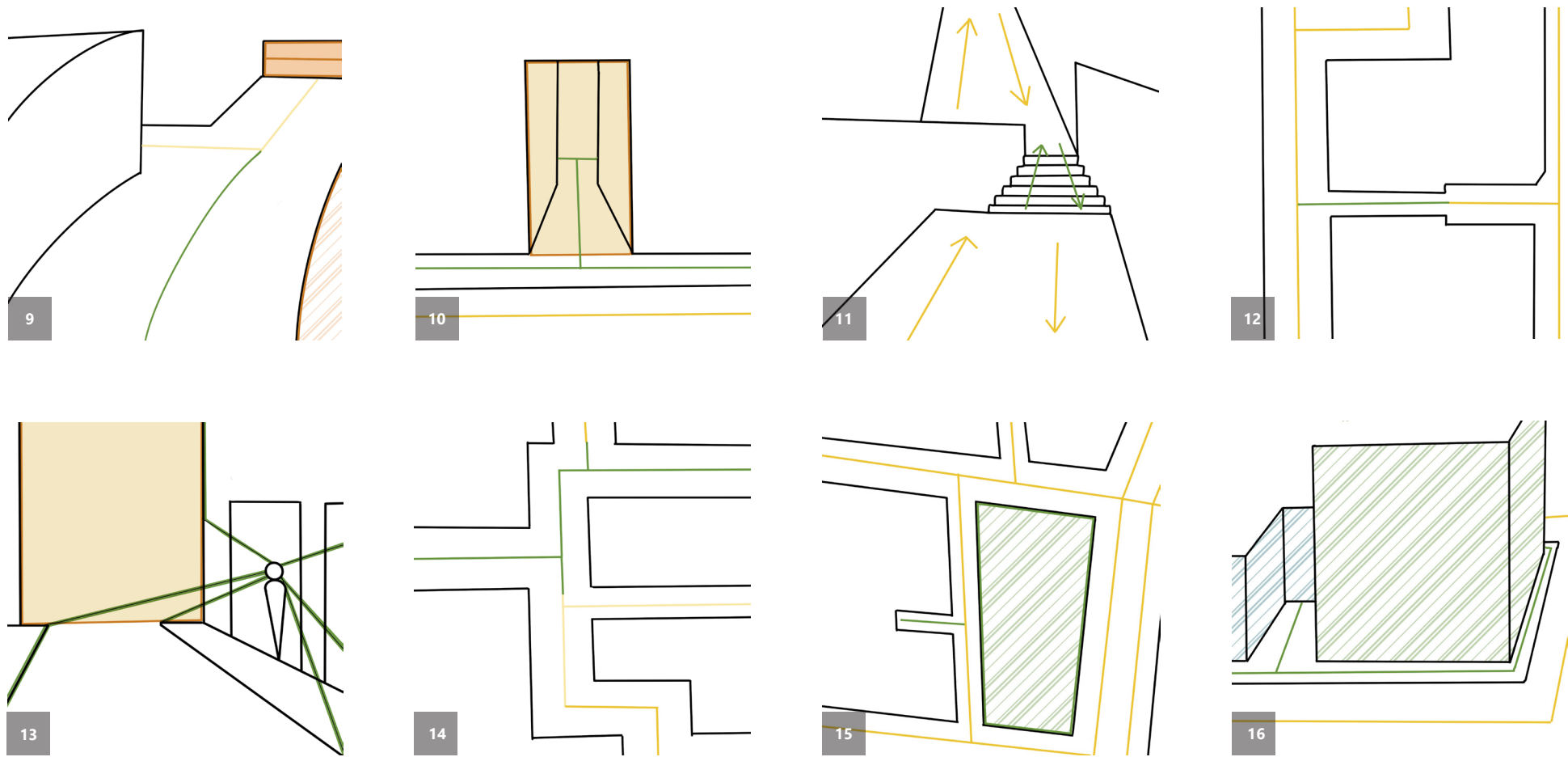
Routes & Boundries Lines Map of Sabra, Beirut
1:4,000

- Primarily Public Vehicular Routes
- Primarily Private Vehicular Routes
- Primarily Pedestrian Routes
- Physical Barriers
- Private-Owned Land Boundaries
- Military-Owned Land Boundaries
- Government-Owned Land Boundaries
- Port of Beirut Land Boundary
- Refugee Camp Boundaries

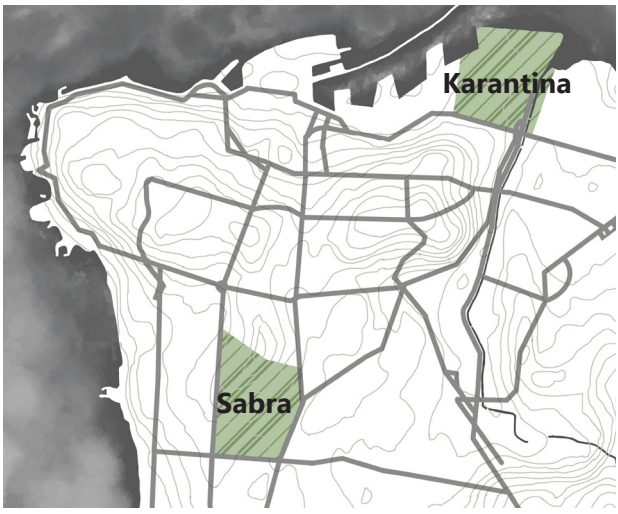
ABSTRACTION MAPPINGS



Routes & Boundries Abstract Visualisations in Karantina, Beirut



Routes & Boundries Abstract Visualisations in Sabra, Beirut



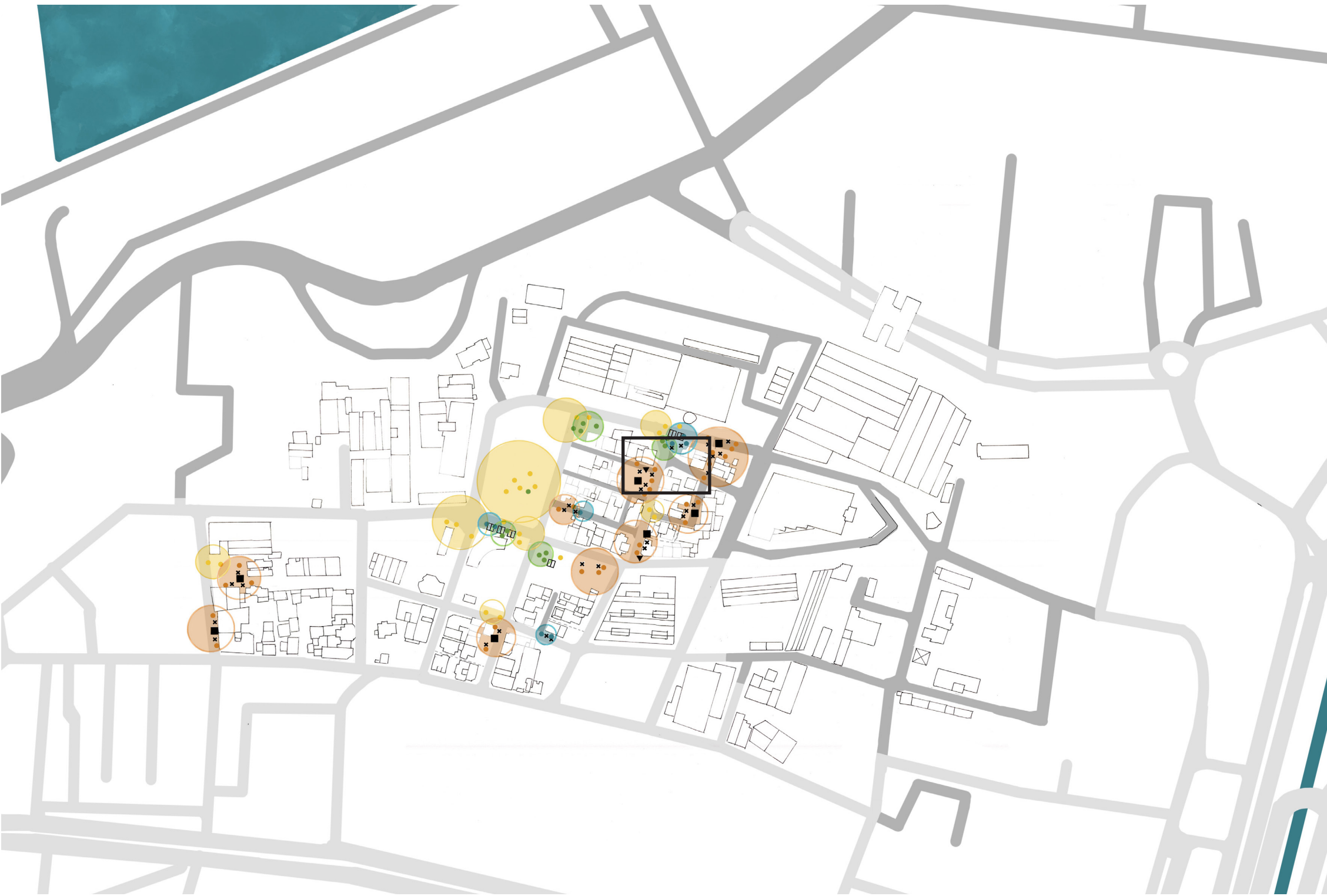
Key Map of Sites in Beirut, Lebanon
1:100,000

5.3.4 OCCUPATION

The occupation of space operates at the intersection of Physical and Intangible Lines. While experienced socially, patterns of occupation can be mapped as Physical Lines.

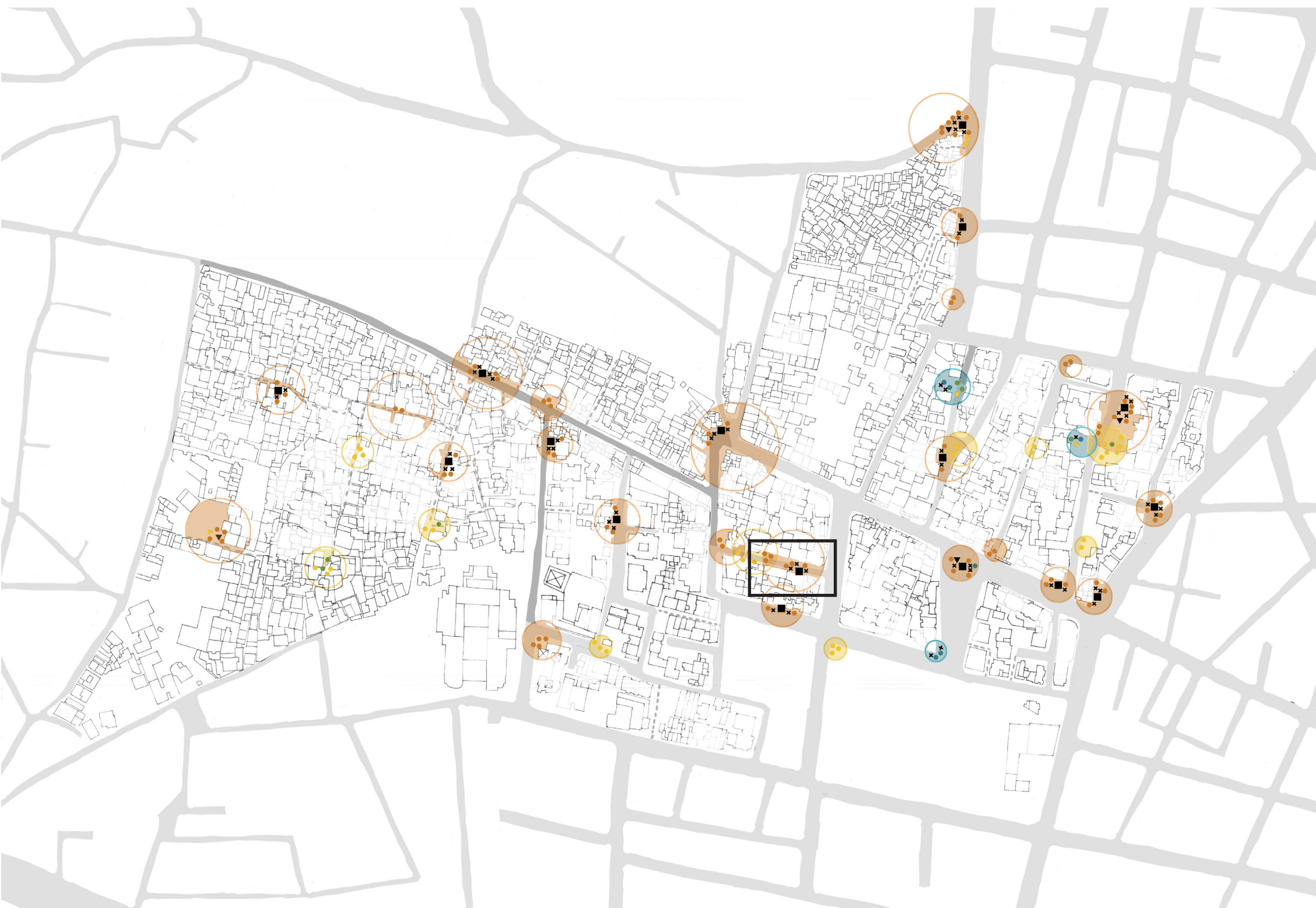
In Sabra, two dominant forms emerge: children's play and adult male socialisation. Children's occupation of space is often contested, reflecting tensions within shared environments. In Karantina, however, children's presence in public space is more widely accepted, highlighting how occupation lines reveal underlying social norms and power relations.

COMMONLY OCCUPIED SPACES



Occupation Line Map of Karantina, Beirut
1:4,000

Boys Girls
Men Women
Tables
Chairs
Other
Child-Specific Street Furniture



Occupation Line Map of Sabra, Beirut
1:4,000

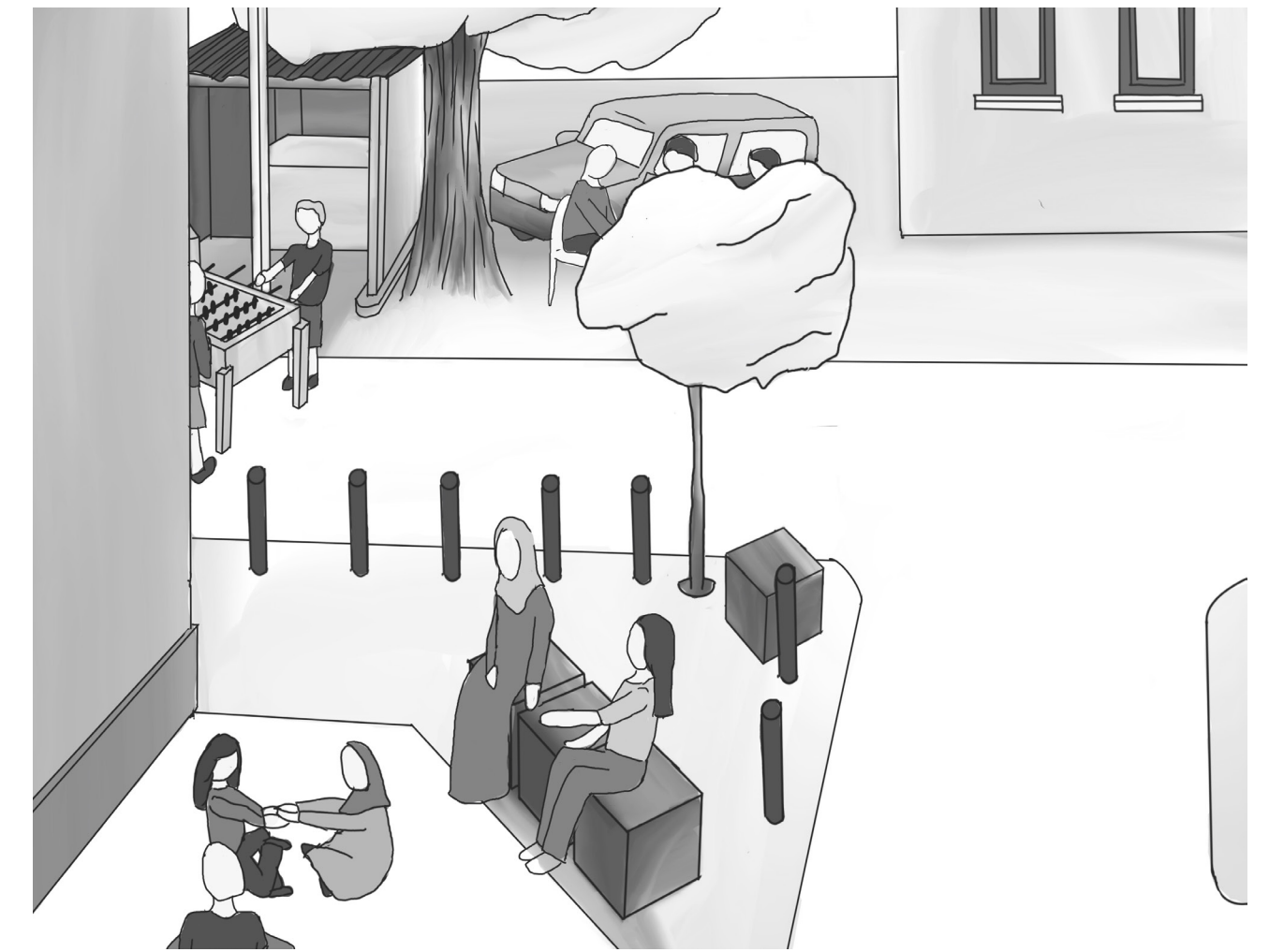
Boys Girls
Men Women
Tables
Chairs
Other
Child-Specific Street Furniture

MOMENTS OF VARIED STREET OCCUPATION



Plan of Occupation Typical Street in Karantina, Beirut
1:250

Boys Girls
Men Women



Sketch Occupation of Typical Street in Karantina, Beirut

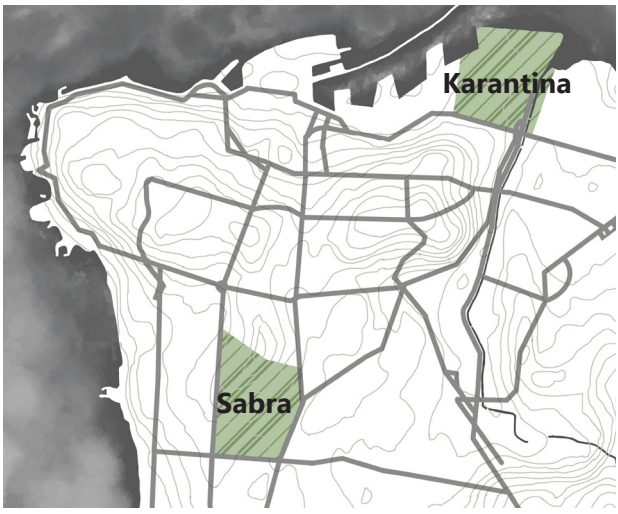


Plan of Occupation Typical Street in Sabra, Beirut
1:250

Boys Girls
Men Women



Sketch Occupation of Typical Street in Sabra, Beirut



Key Map of Sites in Beirut, Lebanon
1:100,000

6.4 INTANGIBLE LINES: INTERACTION CONSOLIDATION

While Physical Lines relate to the material environment Intangible Lines refer to socio-cultural dimensions of the city. Intangible Lines capture the socio-cultural dimensions of the city and are identified through the Collaborative Data Collection (C.D.C.) strategy.

These lines require lived experience and multiple perspectives to interpret. By consolidating them, the analysis reveals shared urban challenges and enables the articulation of collective urban imaginaries, positioning them as critical to the analytical framework rather than supplementary observations.

6.2.4 EXPLICIT INTANGIBLE LINE INTERACTIONS



Explicit Intangible Line Interactions in Karantina, Beirut
1:7,500

- Public/Private Line
- Age Line
- Gender Line



Implicit Intangible Line Interactions in Karantina, Beirut
1:7,500

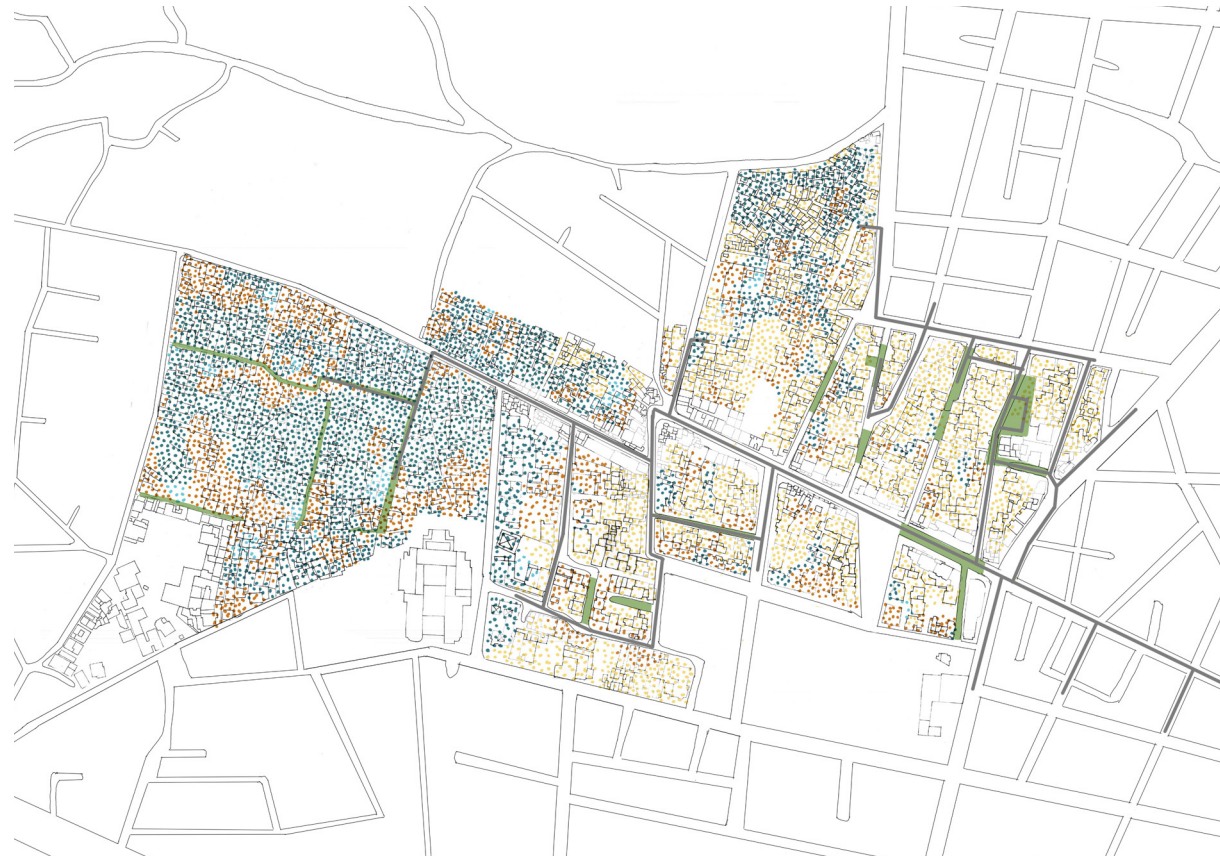
- Diversities Line
- Experiential Radius Line
- Safety Line

6.3.4 IMPLICIT INTANGIBLE LINE INTERACTIONS



Explicit Intangible Line Interactions in Sabra, Beirut
1:7,500

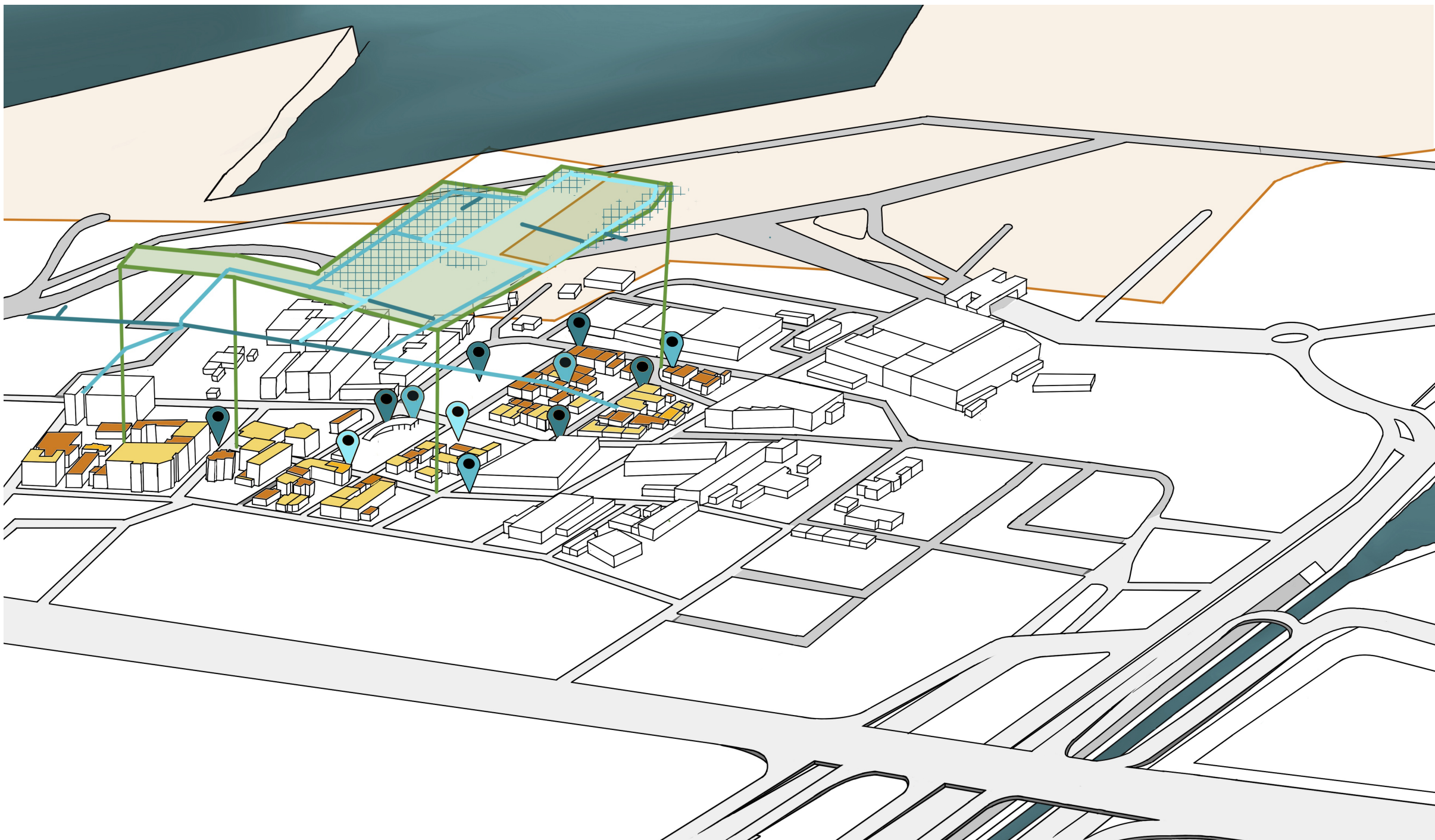
- Public/Private Line
- Age Line
- Gender Line



Implicit Intangible Line Interactions in Sabra, Beirut
1:7,500

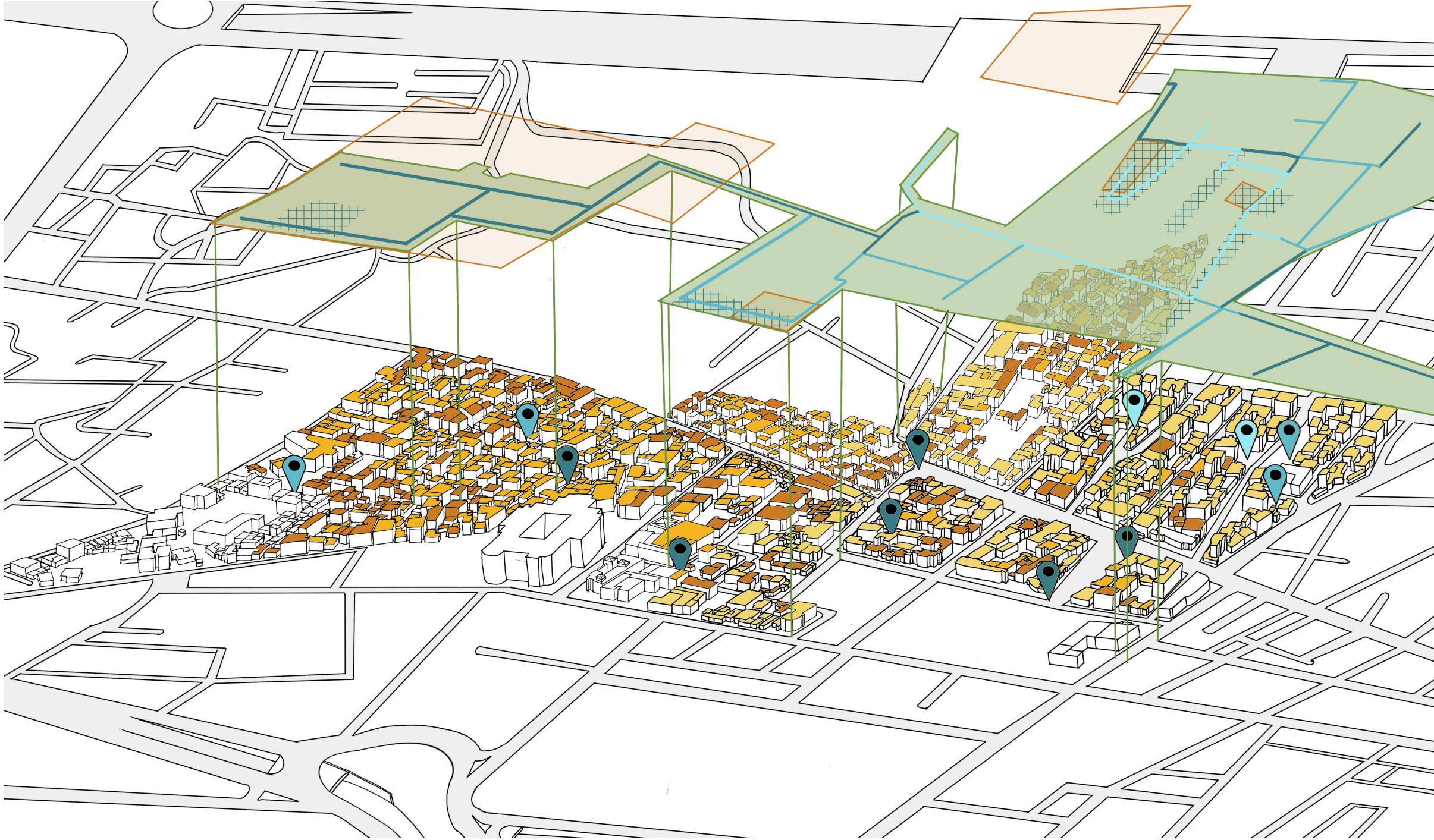
- Diversities Line
- Experiential Radius Line
- Safety Line

INTANGIBLE LINES: INTERACTION CONSOLIDATION



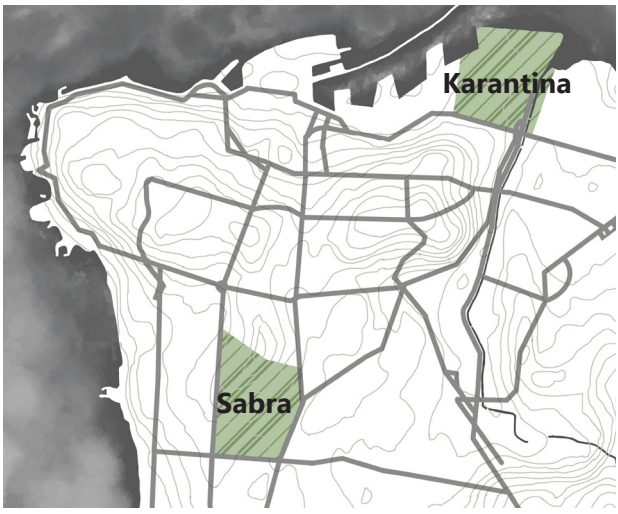
Intangible Lines Planometric Map of Karantina, Beirut
1:7,500

- Public/Private Line
- Age Line
- Gender Line
- Diversities Line
- Safety Line
- Experiential Radius Line



Intangible Lines Planometric Map of Sabra, Beirut
1:7,500

- Public/Private Line
- Age Line
- Gender Line
- Diversities Line
- Safety Line
- Experiential Radius Line



Key Map of Sites in Beirut, Lebanon
1:100,000

6.2.1 PUBLIC/PRIVATE

The Public/Private Line structures many spatial relationships within both neighbourhoods, though it manifests differently in each.

In Karantina, spatial perception extends from private interiors to semi-private neighbourhood zones and outward to public edges. In Sabra, this gradient is more compressed and typical of dense urban environments, though refugee camps operate as collectively private enclaves.

These distinctions highlight how spatial boundaries are socially constructed and context-dependent.

SOCIALLY PERCEIVED PUBLIC/PRIVATE ROUTES



Public/Private Line Map of Karantina, Beirut
1:4,000

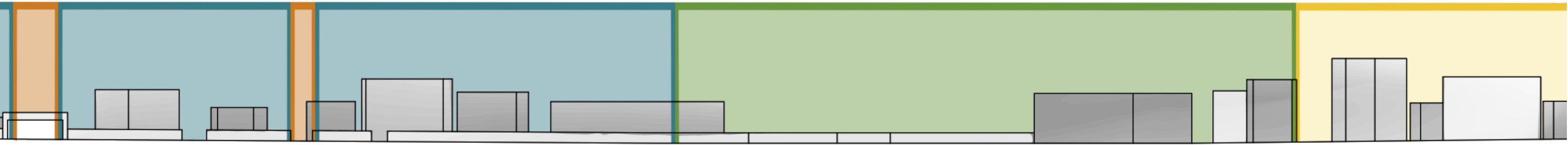
Private
Semi-Public/Private
Non-Social Public
Social Public



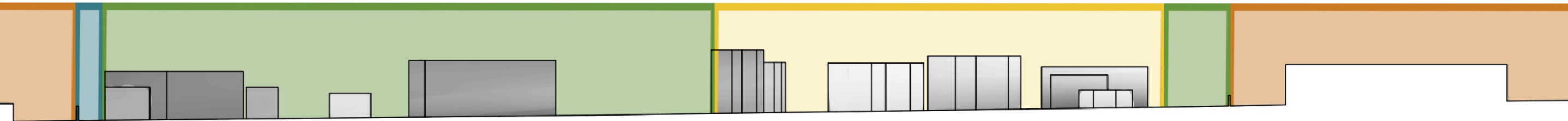
Public/Private Line Map of Sabra, Beirut
1:4,000

Private
Semi-Public/Private
Non-Social Public
Social Public

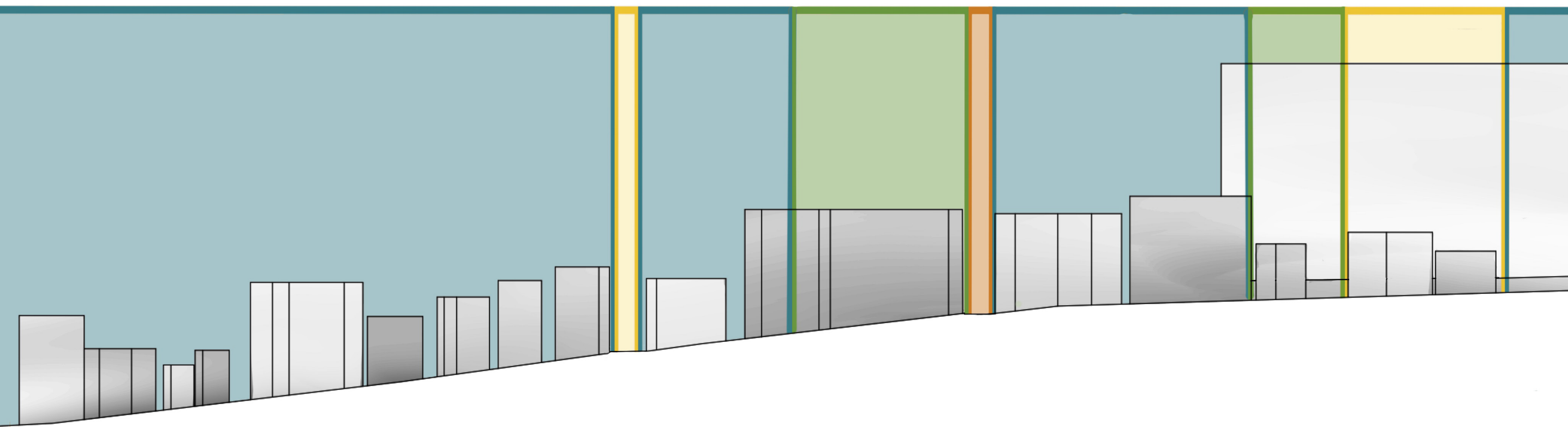
PRIVATE/PUBLIC LIMINALITY ON KEY STREETS



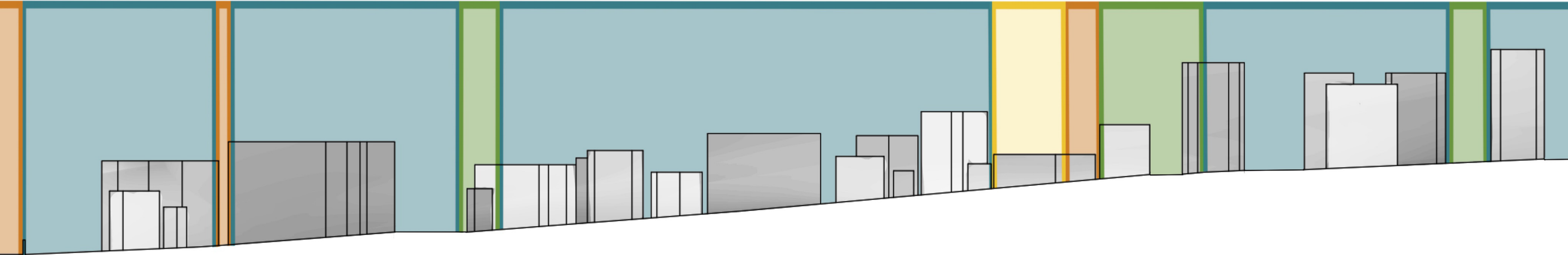
Public/Private Street Section A-A in Karantina, Beirut
1:1,000



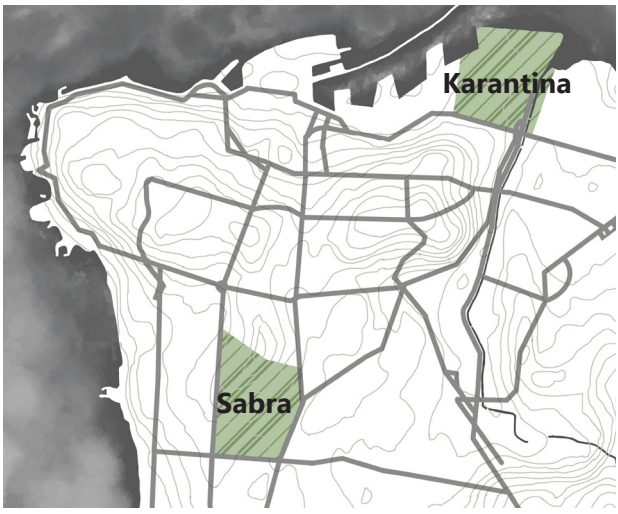
Public/Private Street Section B-B in Karantina, Beirut
1:1,000



Public/Private Street Section C-C in Sabra, Beirut
1:1,000



Public/Private Street Section D-D in Sabra, Beirut
1:1,000



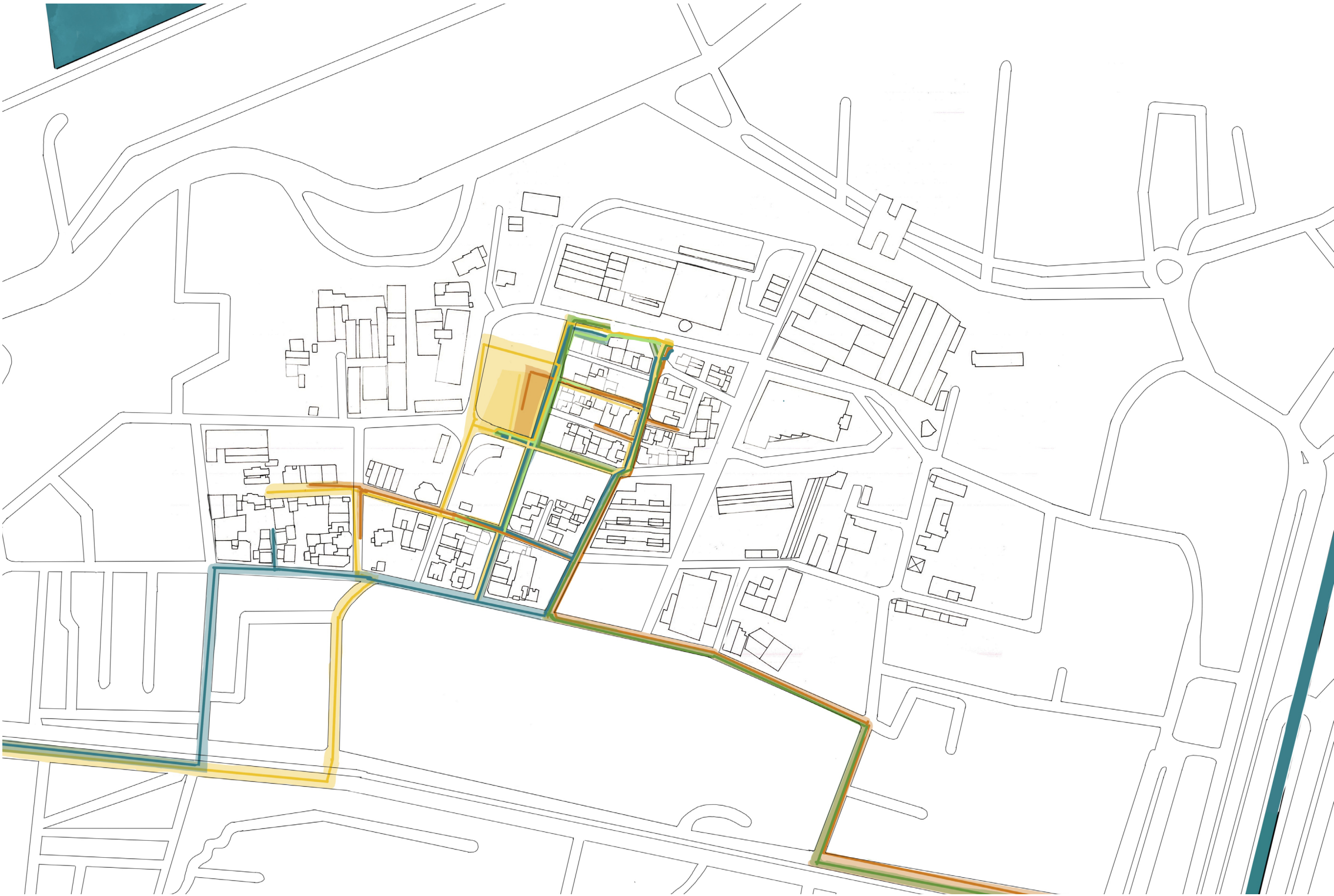
Key Map of Sites in Beirut, Lebanon
1:100,000

6.2.2/3 AGE & GENDER

Age and gender significantly shape spatial experience within Beirut.

While the Age Line defines children's mobility, the Gender Line often exerts a stronger influence. Observations indicate that younger boys typically experience greater spatial freedom than older girls, exposing gendered inequalities embedded within urban space.

ROUTES USED BY CHILDREN



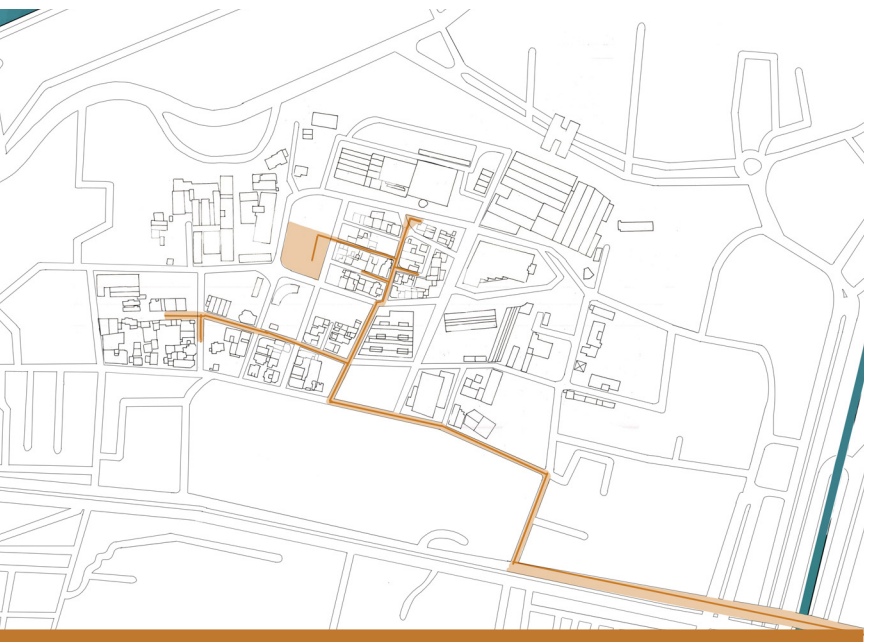
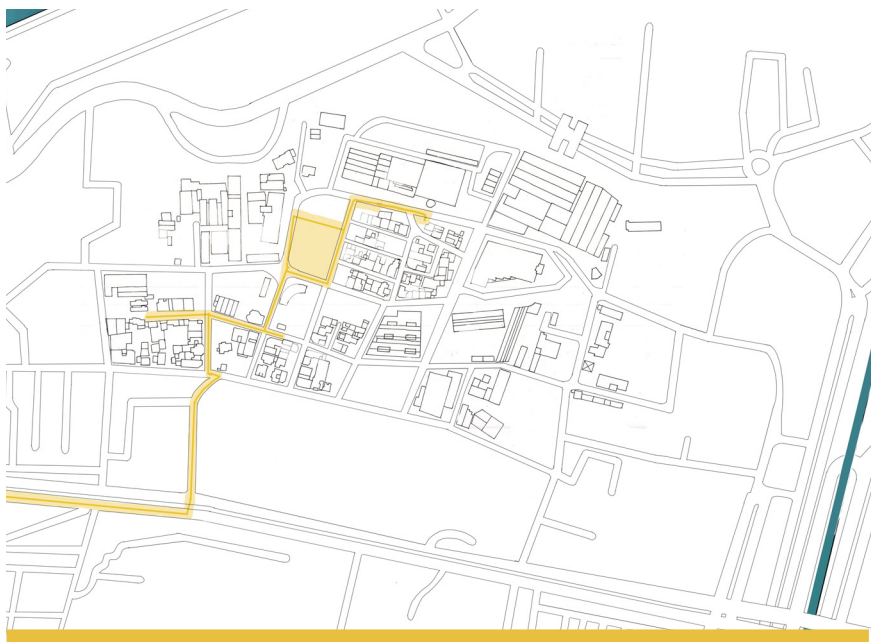
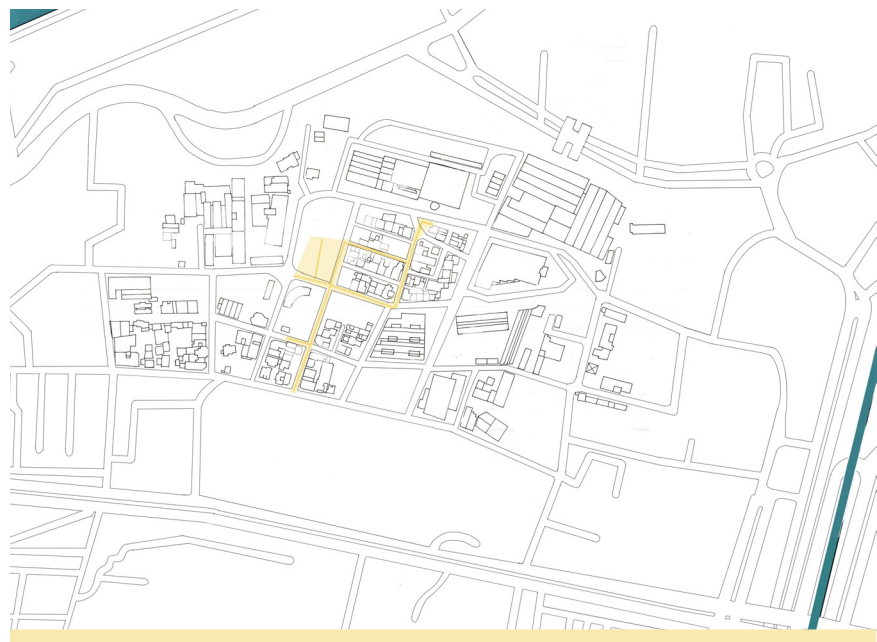
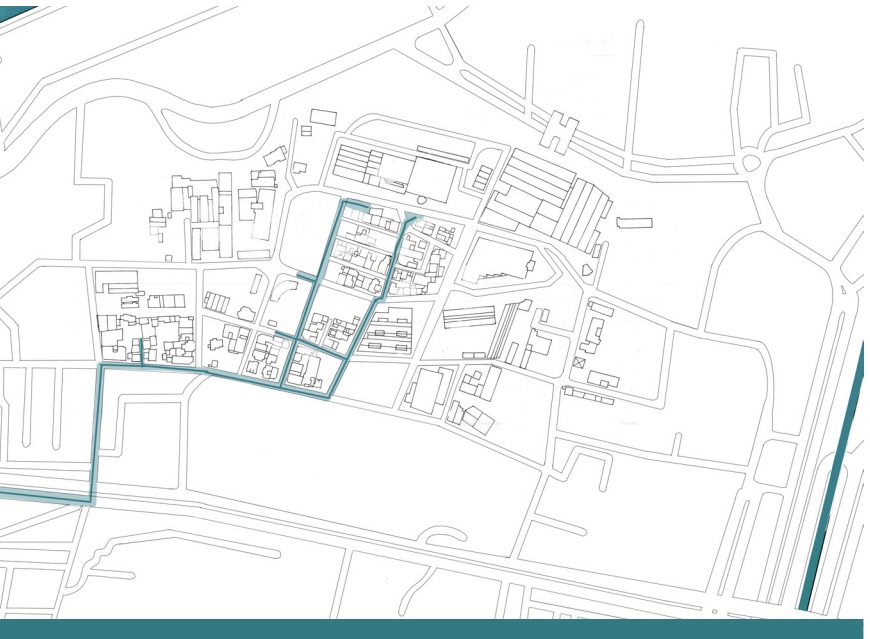
Age & Gender Lines Combined Map of Karantina, Beirut
1:4,000



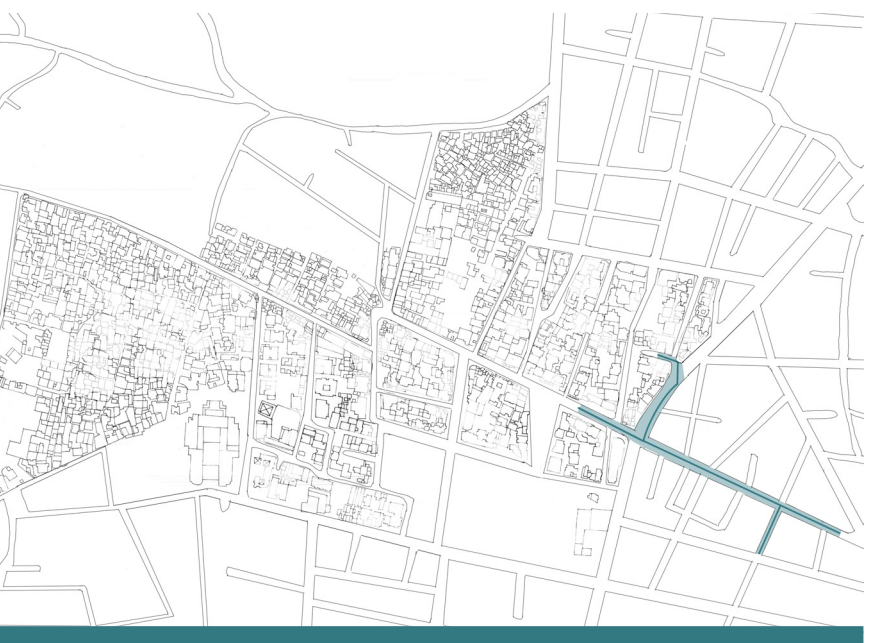
Age & Gender Lines Combined Map of Sabra, Beirut
1:4,000

- Girl, 7-Years-Old
- Girl, 9-Years-Old
- Girl, 13-Years-Old
- Boy, 6-Years-Old
- Boy, 10-Years-Old
- Boy, 12-Years-Old

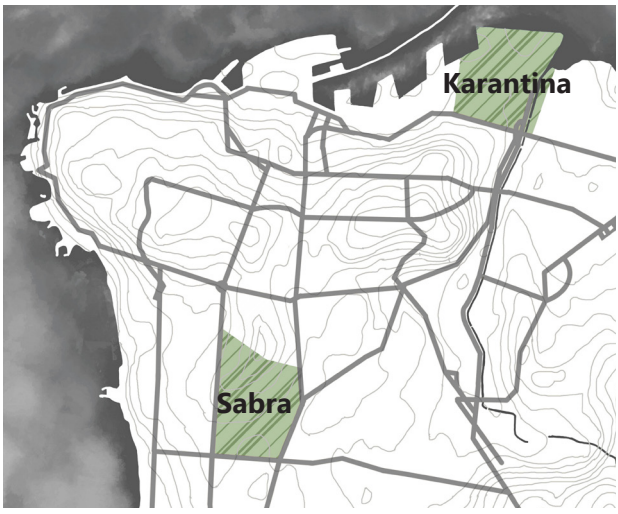
JOURNEYS OF INDIVIDUAL CHILDREN ON A SCHOOL DAY



Individual Children Physical Journeys Maps of Karantina, Beirut
1:10,000



Individual Children Physical Journeys Maps of Sabra, Beirut
1:10,000



Key Map of Sites in Beirut, Lebanon
1:100,000

6.3.1/3 DIVERSITIES & SAFTEY

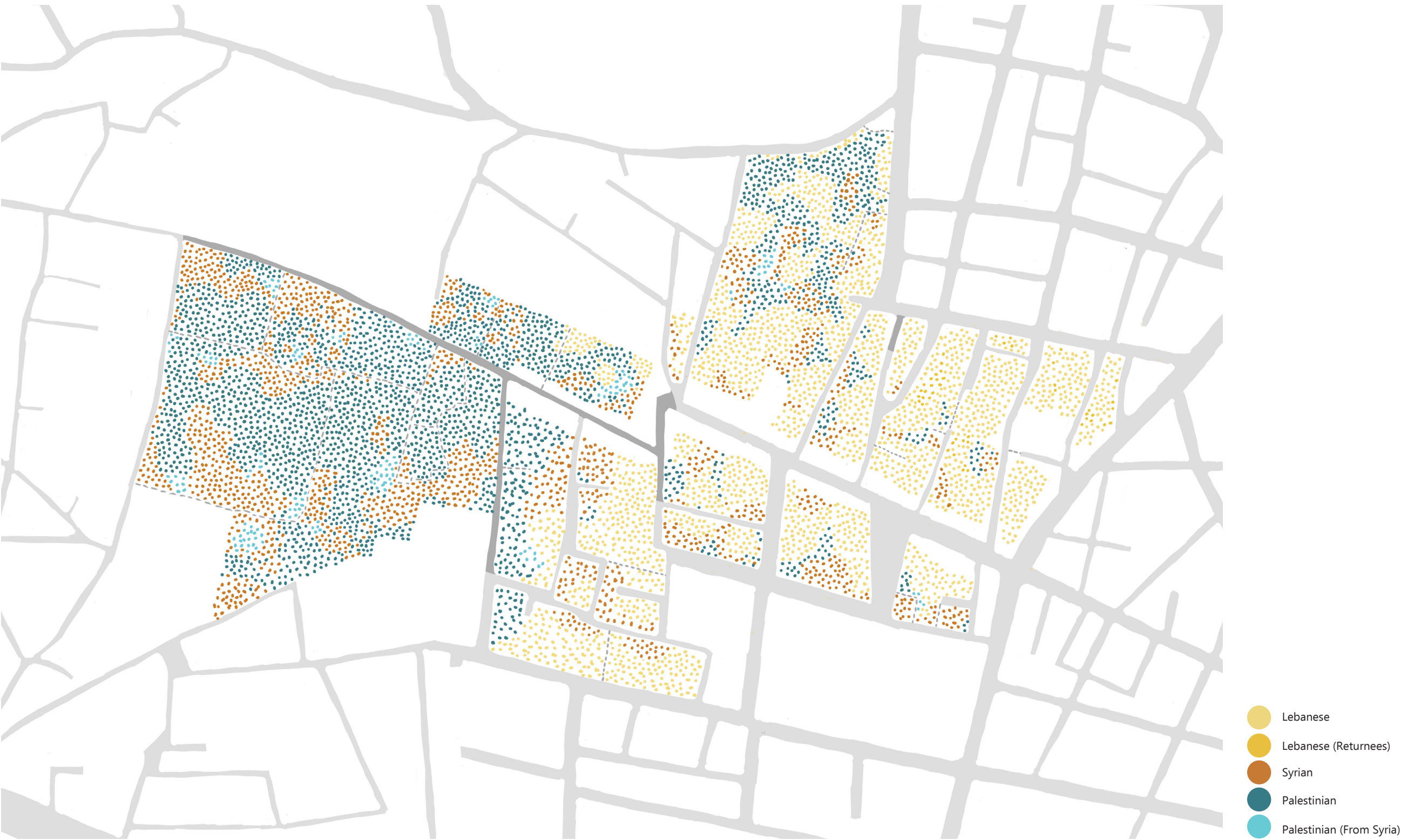
Population density influences community formation. Karantina's lower density supports cohesive social networks, whereas Sabra's density produces more fragmented but adaptive forms of community.

Mapping the Diversities Line alongside the Safety Line reveals how perceived and actual safety conditions are closely tied to social divisions, often operating at the street scale.

NATIONALITY DISTRIBUTION

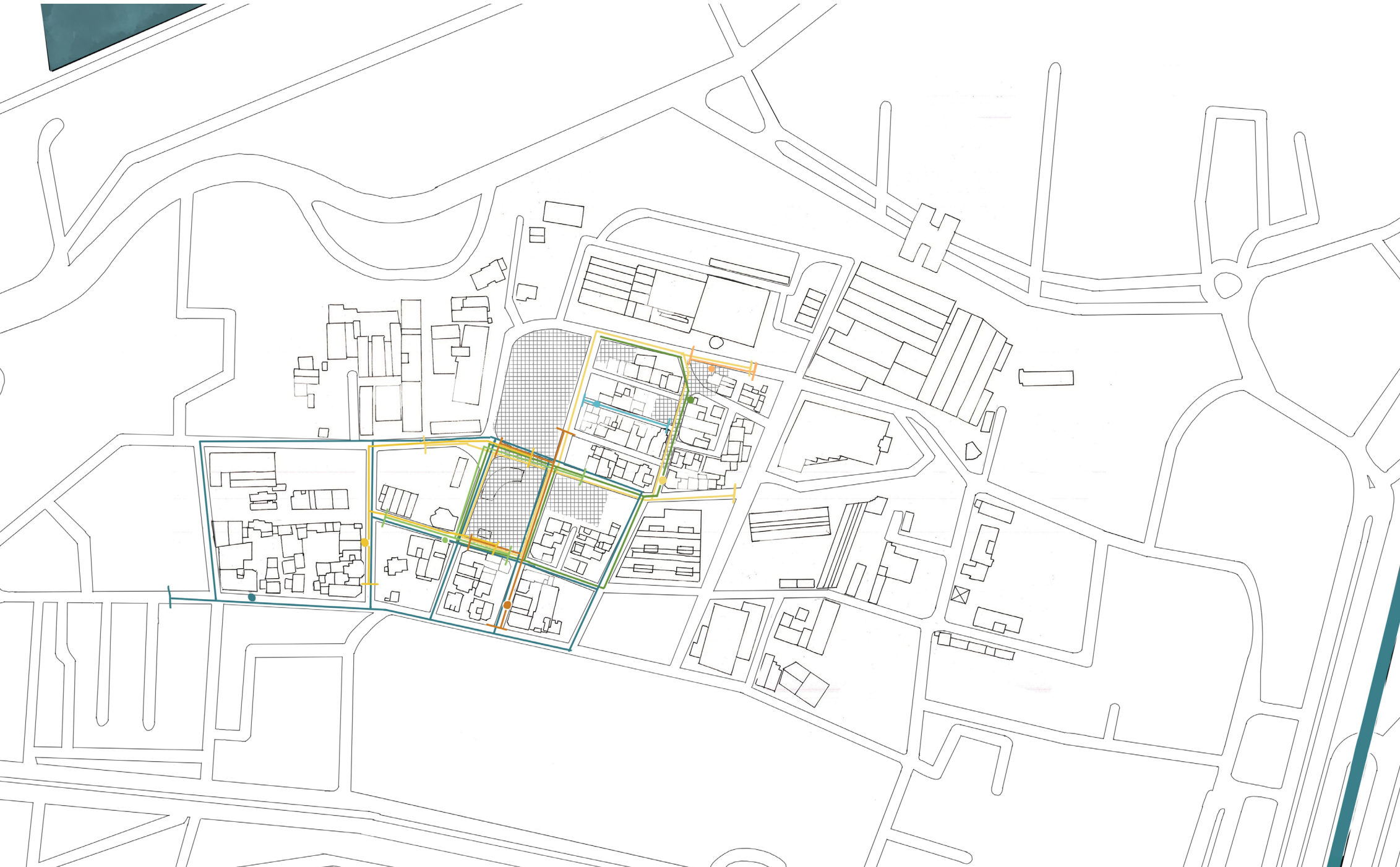


Demographic Diversity Map of Karantina, Beirut
1:4,000

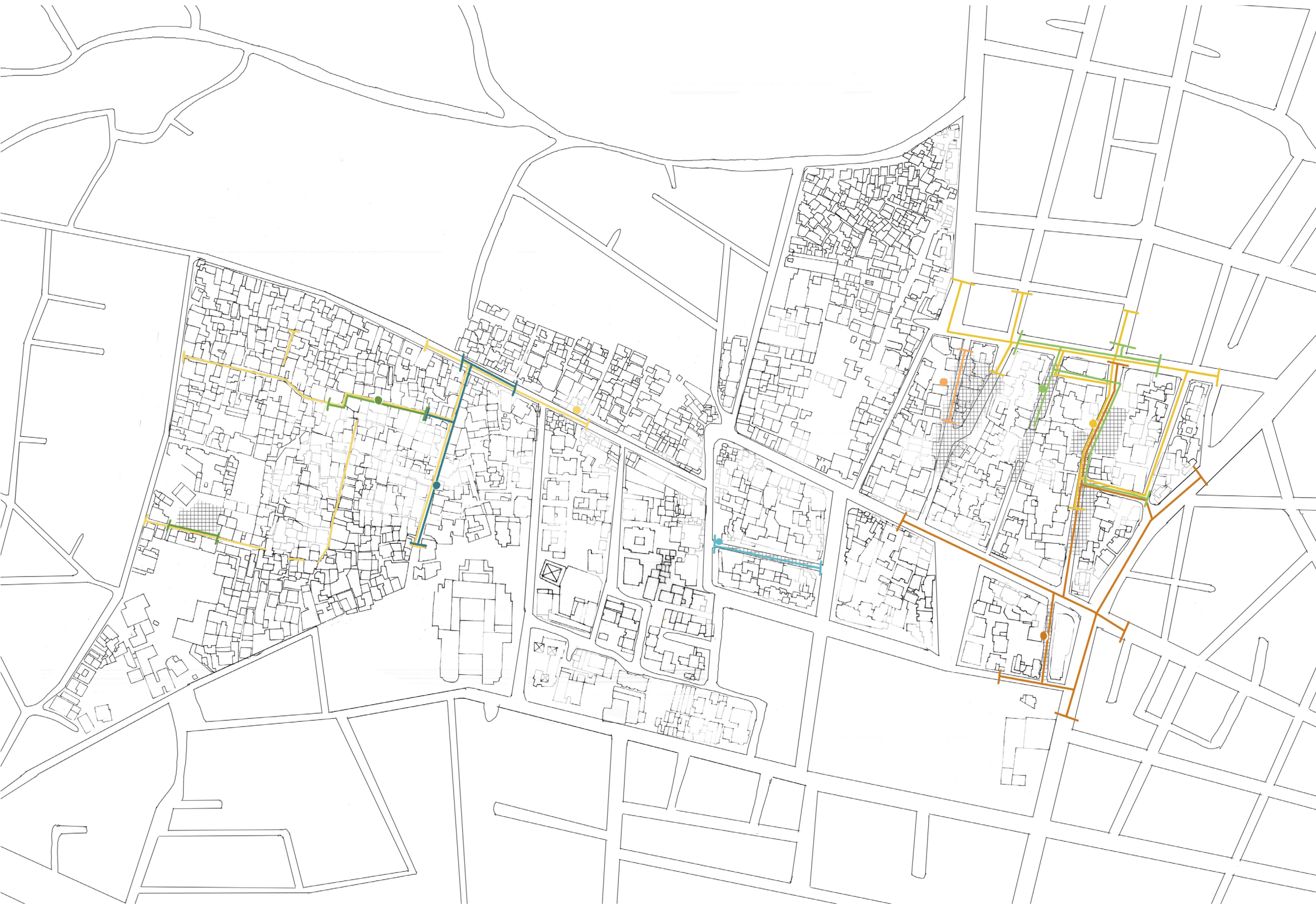


Public/Private Line Map of Sabra, Beirut
1:4,000

CHILD-INFORMED SAFE TRAVEL ROUTES



Spatial Safety as Defined by Parents of Karantina, Beirut
1:4,000



Spatial Safety as Defined by Parents of Sabra, Beirut
1:4,000

6.3.2 EXPERIENTIAL RADIUS

Although Experiential Radius can be spatially mapped, it is more accurately understood as an Intangible Line shaped by perception and lived experience.

Children in Karantina engage with a wider urban territory, while those in Sabra experience a more concentrated urban life within their immediate neighbourhood. This contrast demonstrates how experiential boundaries are shaped by both spatial structure and social conditions.

CITY-SCALE RADIUSSES



Map of Children's Experiential Radius Line through Beirut, Lebanon
1:25,000

● Karantina Childrens' Experiential Radius
● Sabra Childrens' Experiential Radius

A.D.C & C.D.C MAPPING COMPARATIVE ANALYSIS



⊕ Approx. Orientation

Architectural vs Collaborative Neighbourhood-Level Experience Maps in Karantina, Beirut



⊕ Approx. Orientation



⊕ Approx. Orientation

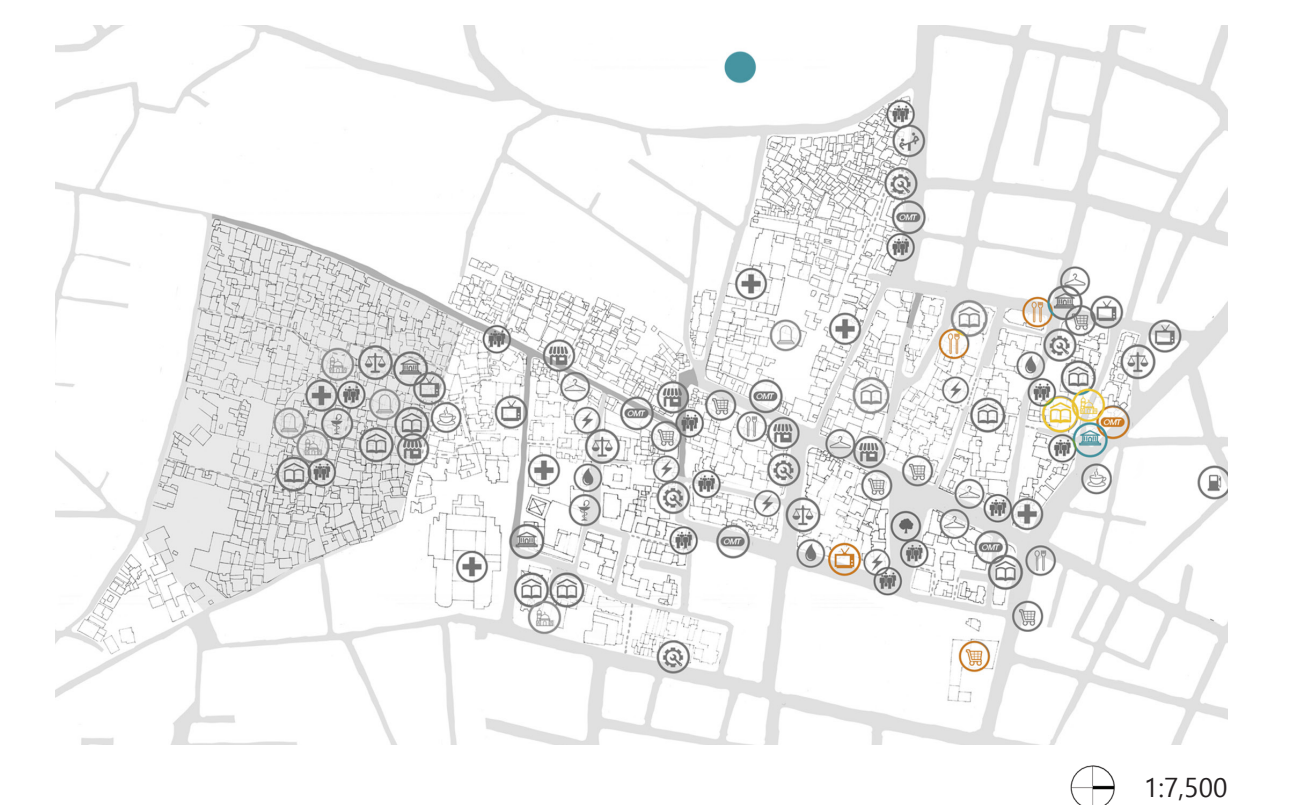


⊕ Approx. Orientation

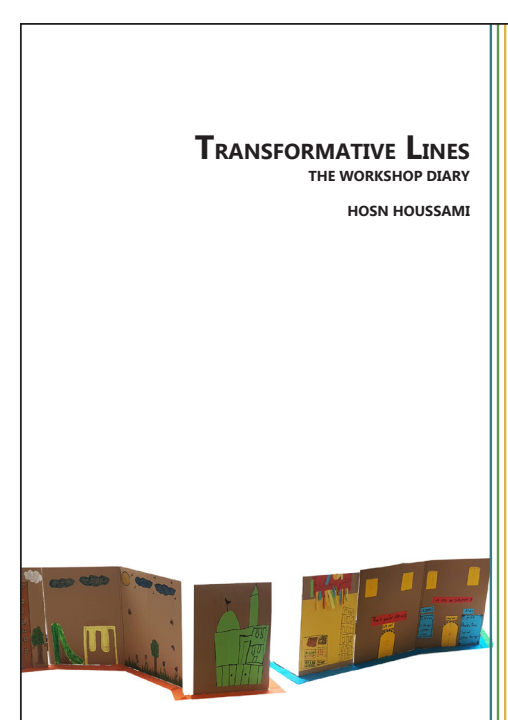
Architectural vs Collaborative Neighbourhood-Level Experience Maps in Sabra, Beirut



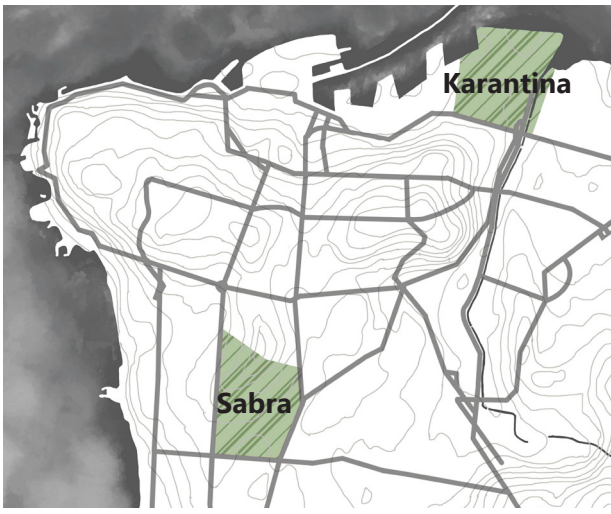
⊕ Approx. Orientation



⊕ Approx. Orientation



Please refer to 'Transformative Lines - The Workshop Dairy'

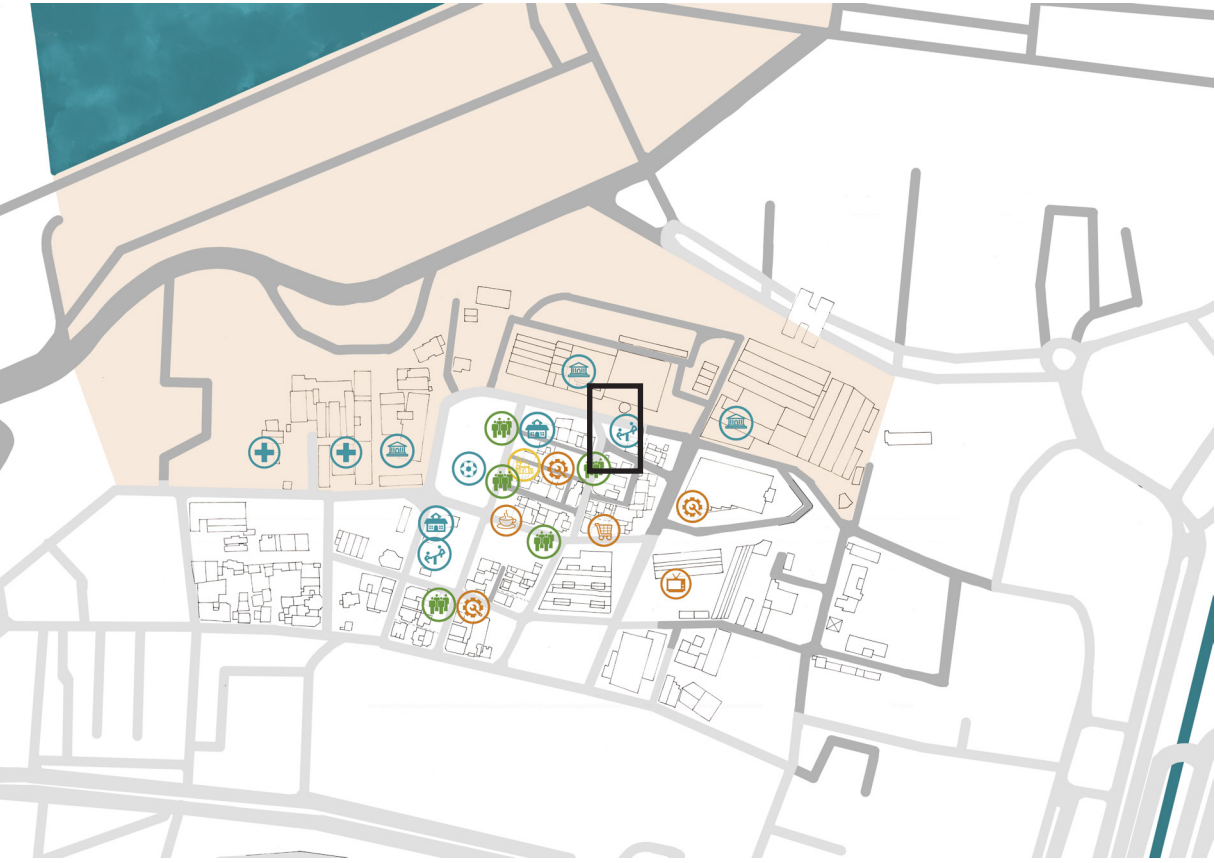


Key Map of Sites in Beirut, Lebanon
1:100,000

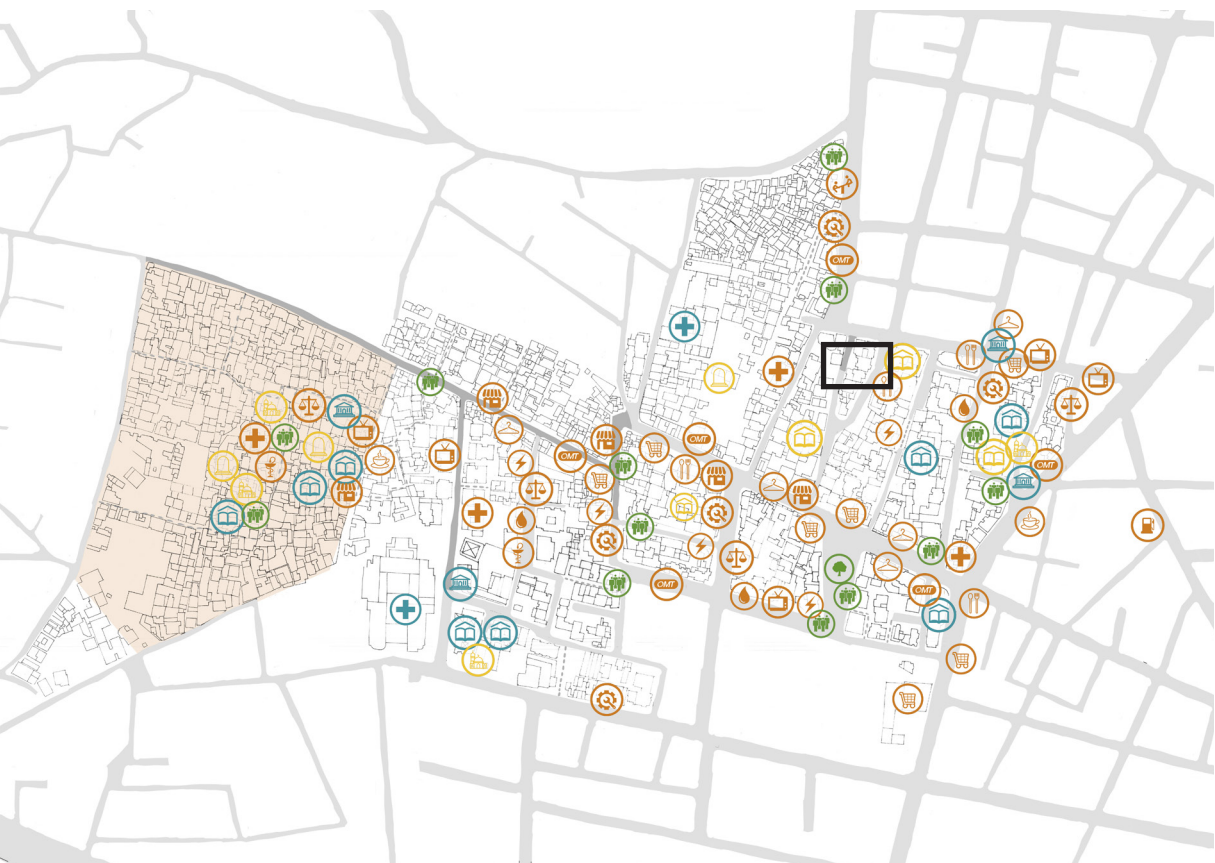
7.2.1 STRUCTURES & PUBLIC/PRIVATE

Analysis of residential thresholds reveals discrepancies between architectural boundaries and perceived ownership.

In Sabra, residents extend notions of ownership into adjacent streets, producing semi-private/public conditions. This highlights the emergence of liminal spatial categories, challenging fixed definitions of boundary lines.



Public/Private Structures Junction Map of Karantina, Beirut
1:7,500



Public/Private Structures Junction Map of Sabra, Beirut
1:7,500

PUBLIC/PRIVATE AMENITIES

Private

- Health Care Facilities
- Electronic Stores
- Money Exchange
- Mechanics
- Legal Advice
- Clothing Stores
- Cafes
- Generic Shops
- Water Distributors
- Petrol Stations
- Clothing Stores
- Playgrounds
- Electricity Distributors
- Groceries
- Pharmacies

Semi-Public/Private

- Places of Worship
- Cemeteries
- Schools
- Sports Pitches

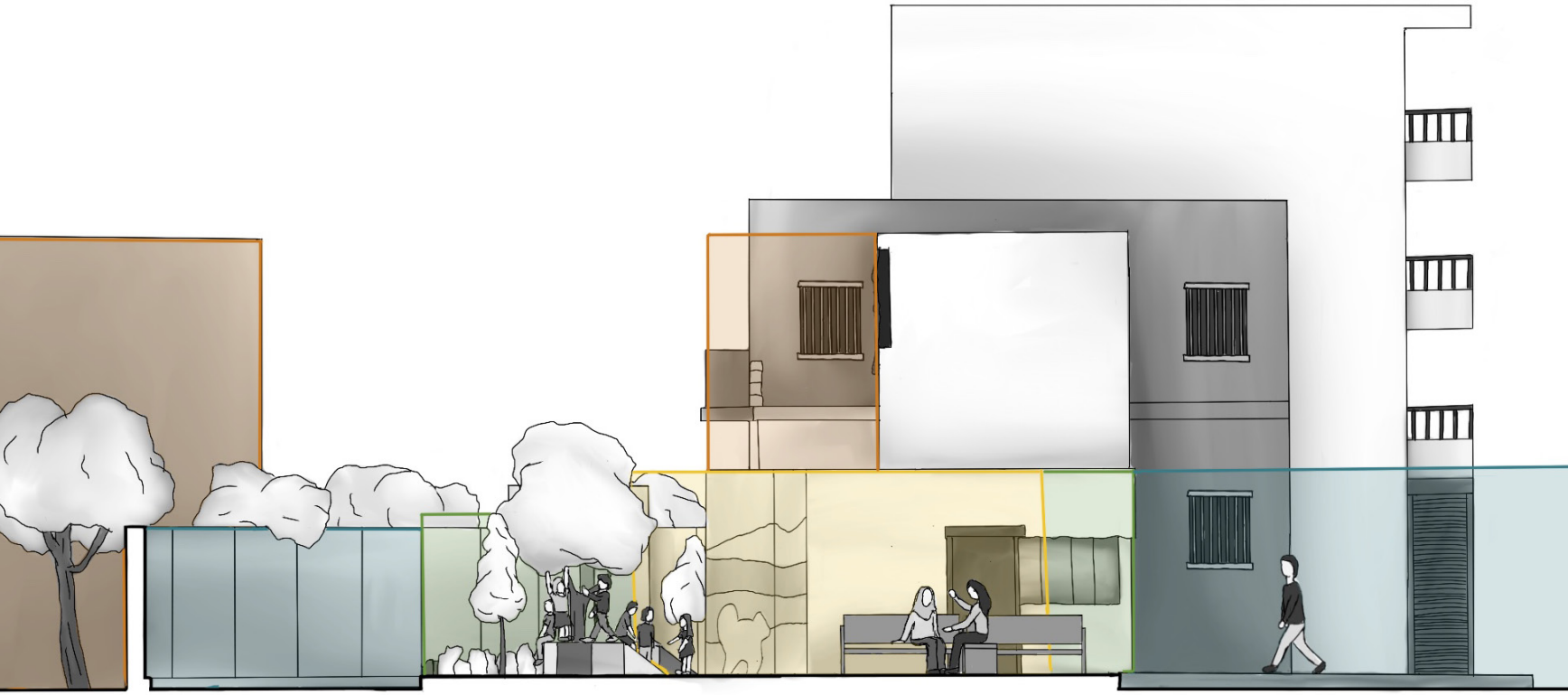
Formal Public

- Government Buildings
- Community Centres
- Schools
- Sports Pitches
- Playgrounds
- Health Care Facilities

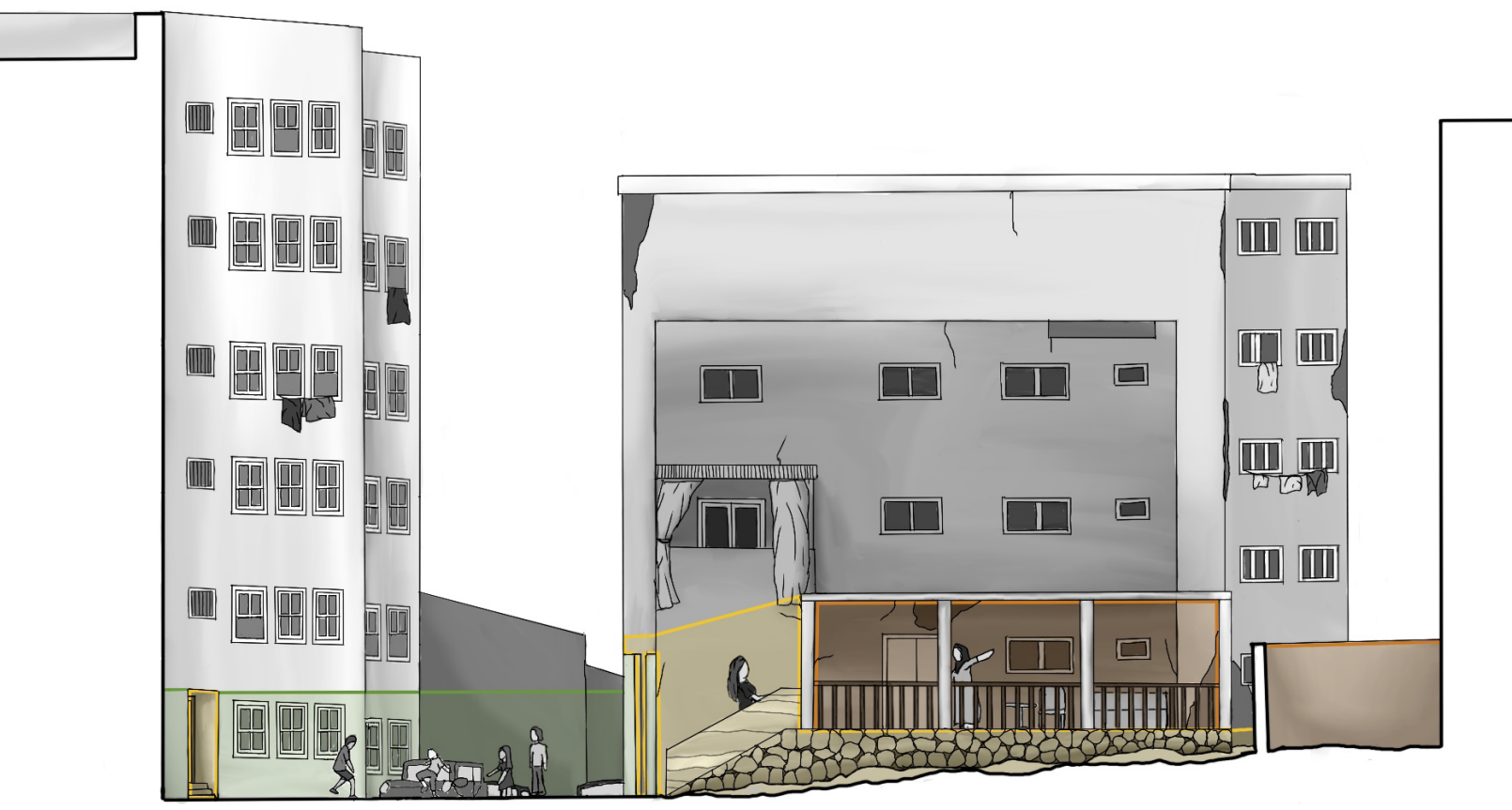
Informal Public

- Informal Green Spaces
- Public/Informal Social Spaces

FROM PRIVATE HOME TO PUBLIC STREET



Public/Private Junction Section of Karantina, Beirut
1:150



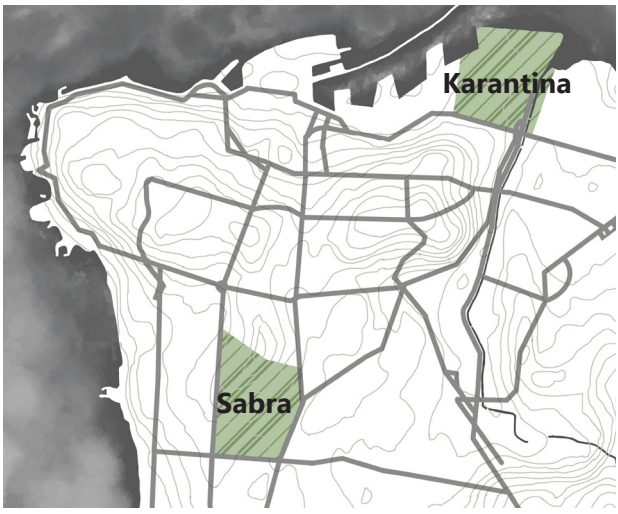
Public/Private Junction Section of Sabra, Beirut
1:150



Public/Private Junction Map of Karantina, Beirut
1:250



Public/Private Junction Map of Sabra, Beirut
1:250



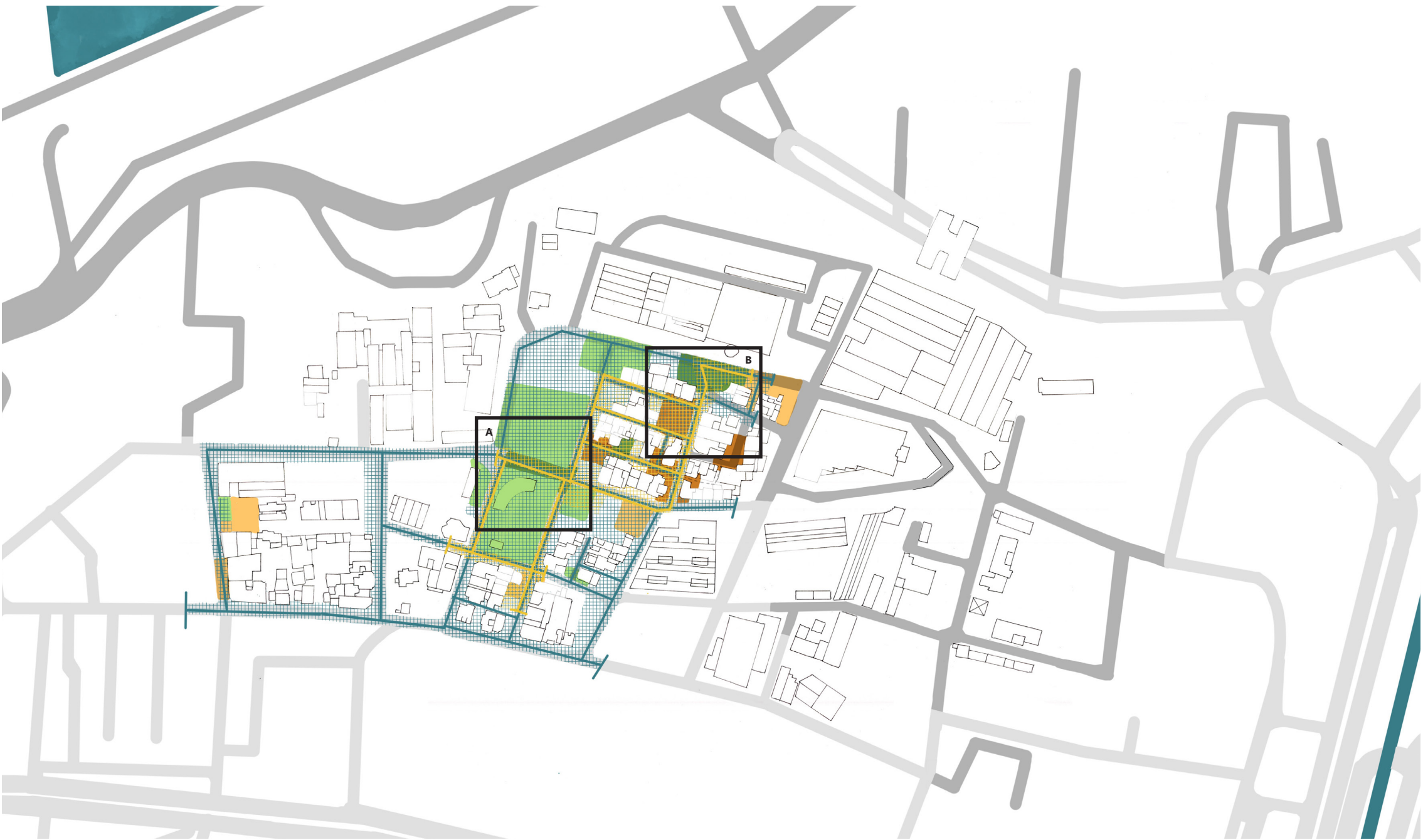
Key Map of Sites in Beirut, Lebanon
1:100,000

7.2.2 ROUTES & SAFETY

The street operates as the primary public space in both neighbourhoods.

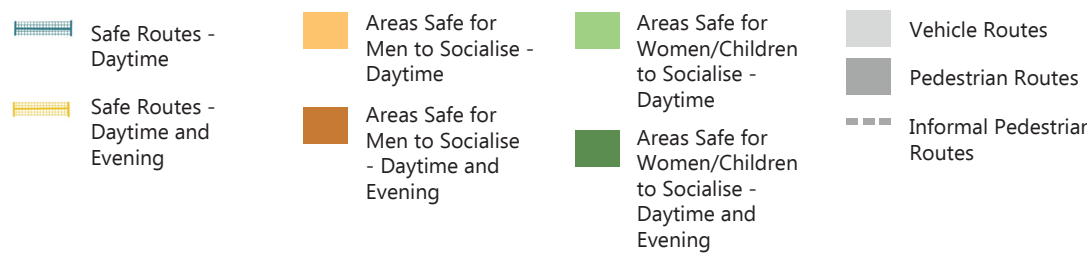
In Sabra, activity fluctuates throughout the day, directly influencing the Safety Line. In Karantina, this relationship is more stable. These variations demonstrate how temporal factors intersect with spatial lines to shape urban experience.

PERCEIVED SAFE SPACES



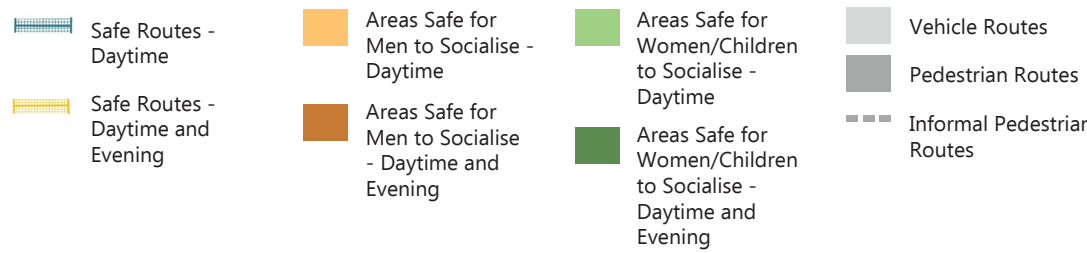
Routes & Safety Junction Map of Karantina, Beirut

1:4,000



Routes & Safety Junction Map of Sabra, Beirut

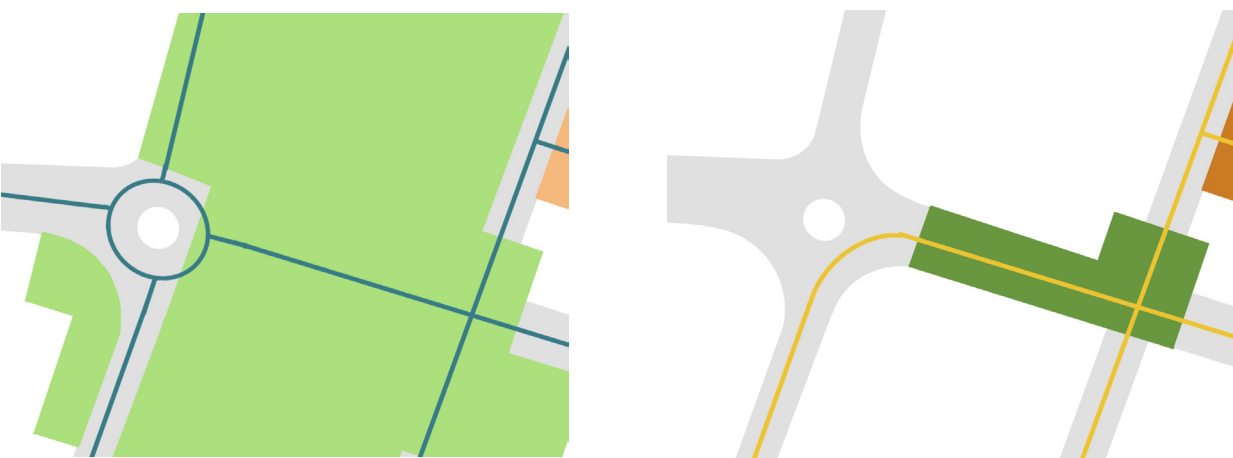
1:4,000



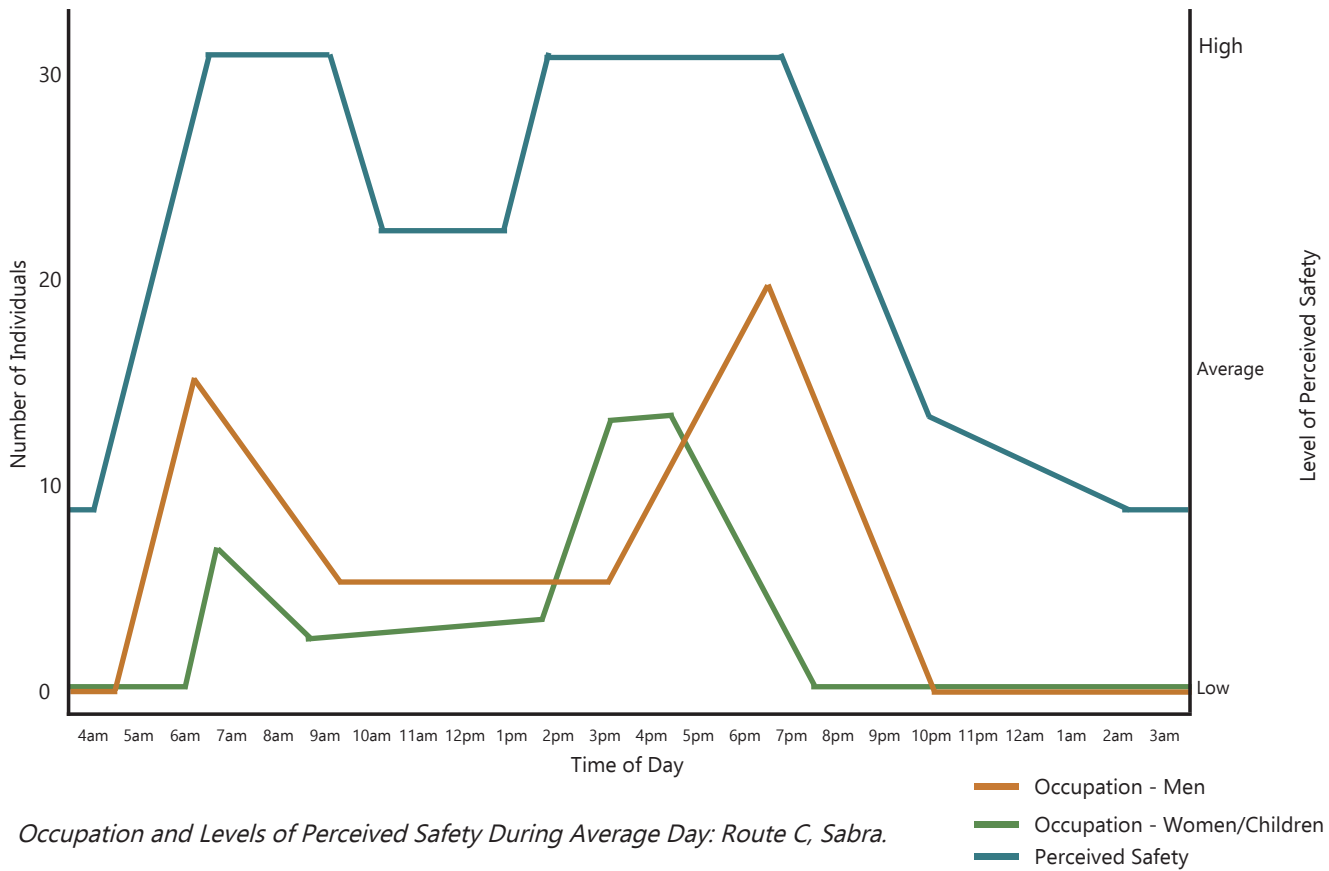
SAFETY FLUCTUATIONS



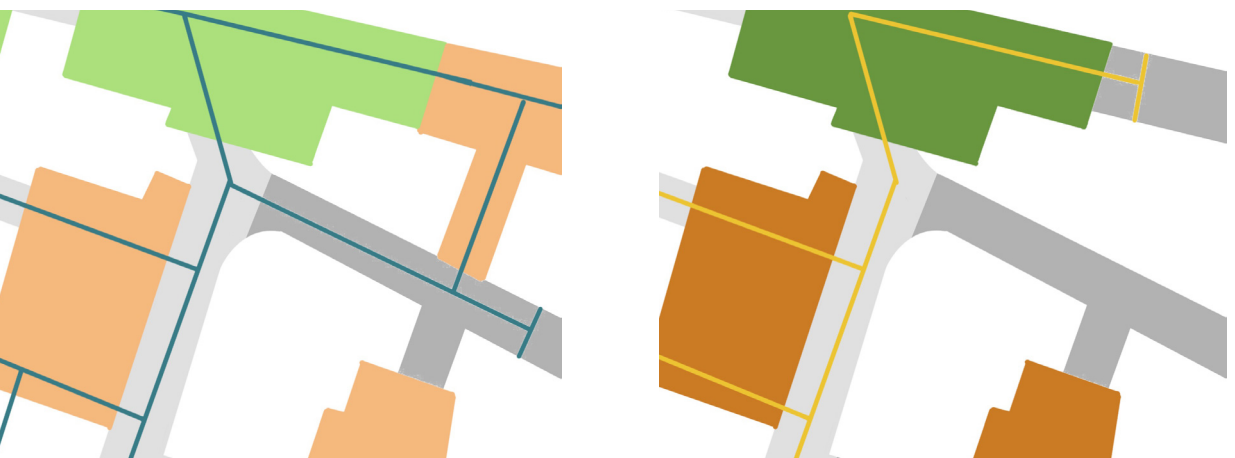
Occupation and Levels of Perceived Safety During Average Day: Route C, Sabra.



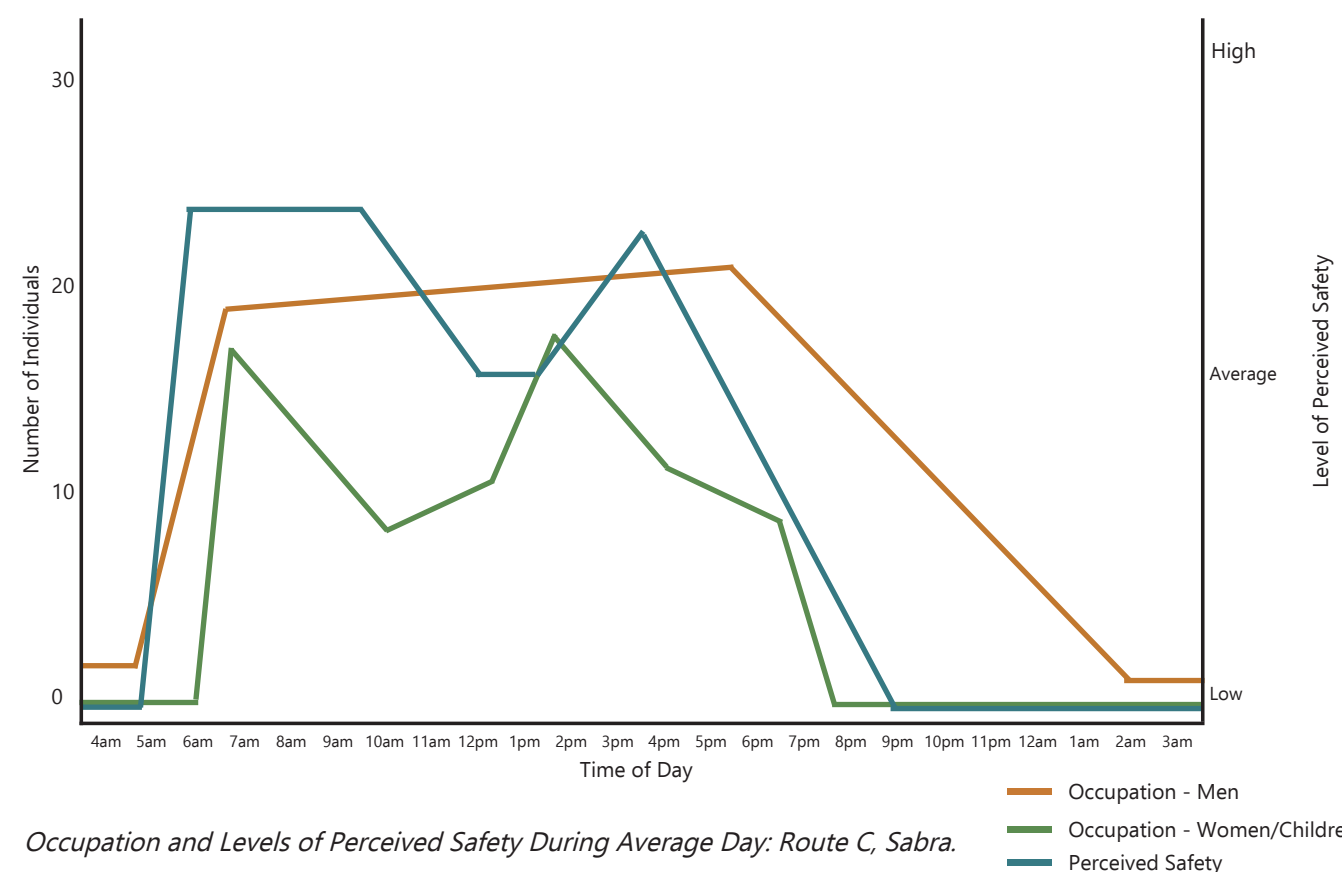
Routes & Safety Abstract Visualisations in Daytime and Evening: Route A, Karantina.



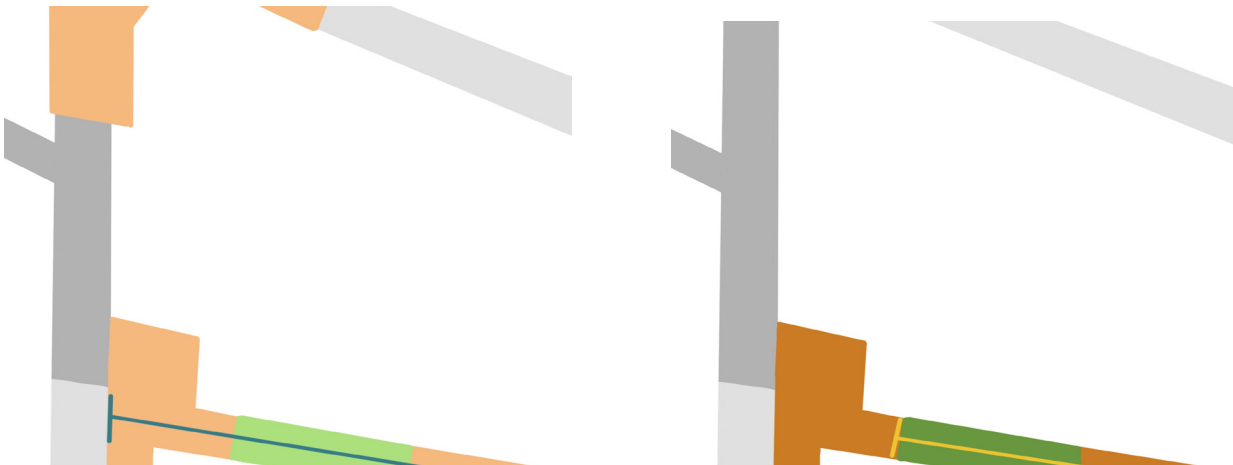
Occupation and Levels of Perceived Safety During Average Day: Route C, Sabra.



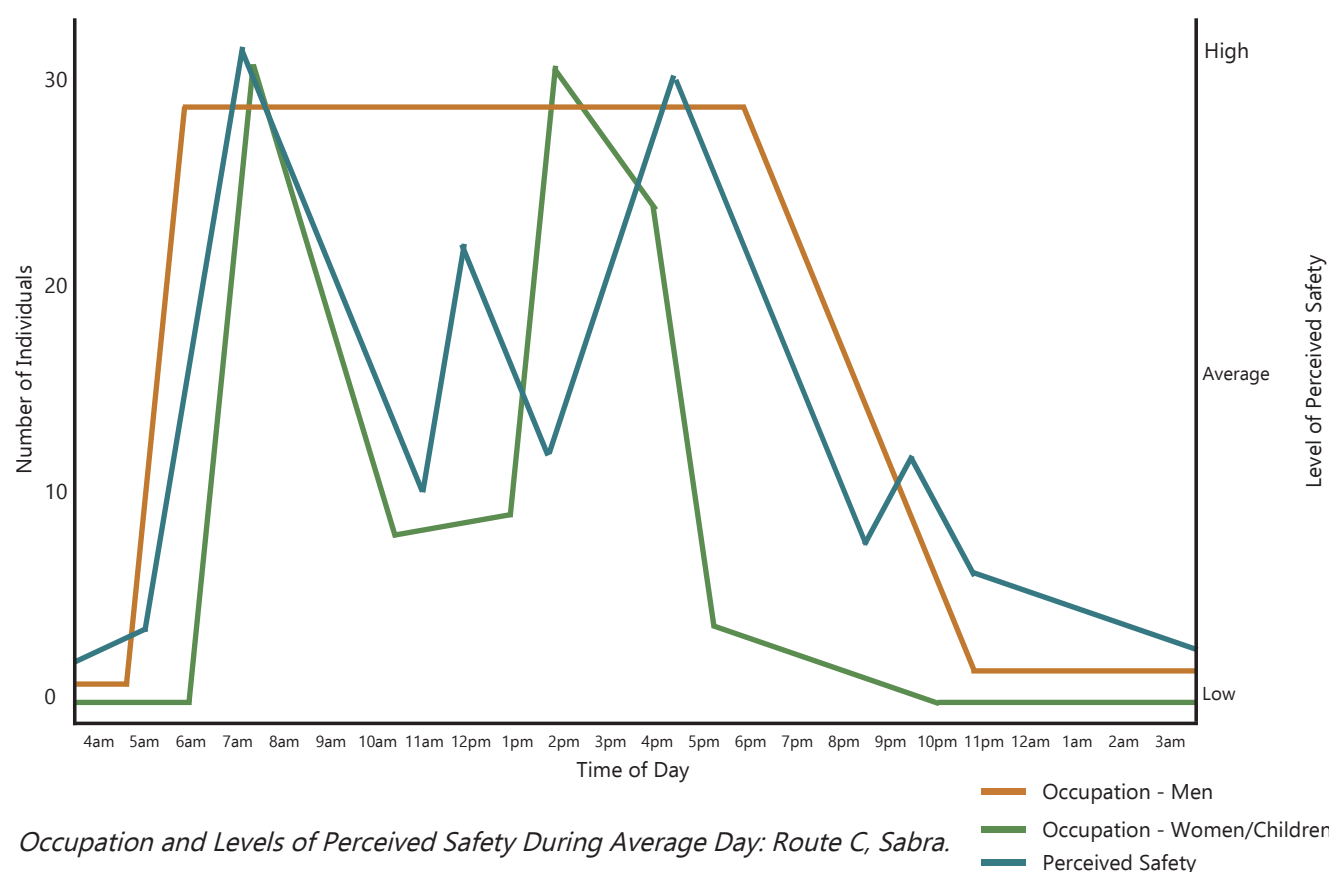
Routes & Safety Abstract Visualisations in Daytime and Evening: Route B, Karantina.



Occupation and Levels of Perceived Safety During Average Day: Route C, Sabra.



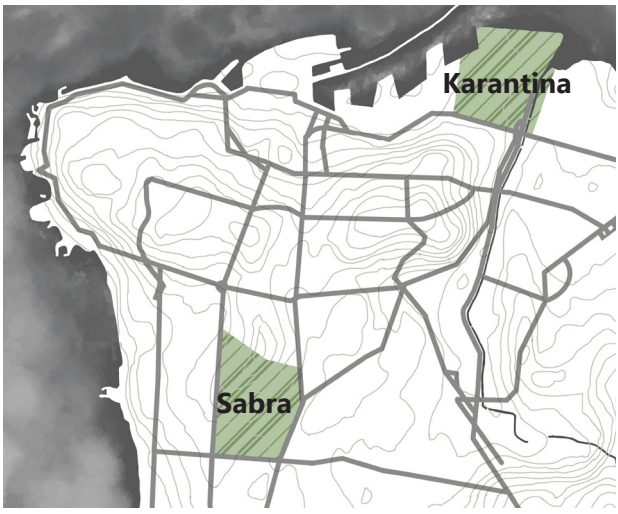
Routes & Safety Abstract Visualisations in Daytime and Evening: Route C, Sabra.



Occupation and Levels of Perceived Safety During Average Day: Route C, Sabra.



Routes & Safety Abstract Visualisations in Daytime and Evening: Route D, Sabra.



Key Map of Sites in Beirut, Lebanon
1:100,000

ACCESSIBLE GREEN SPACES



Green Space & Boundries Junction Map of Karantina, Beirut

1:4,000

- Green Land
- Trees and Shrubby
- Camps
- Public Inaccessible Government Land
- Public Semi-accessible Government Land
- Private Land



Green Space & Boundries Junction Map of Sabra, Beirut

1:4,000

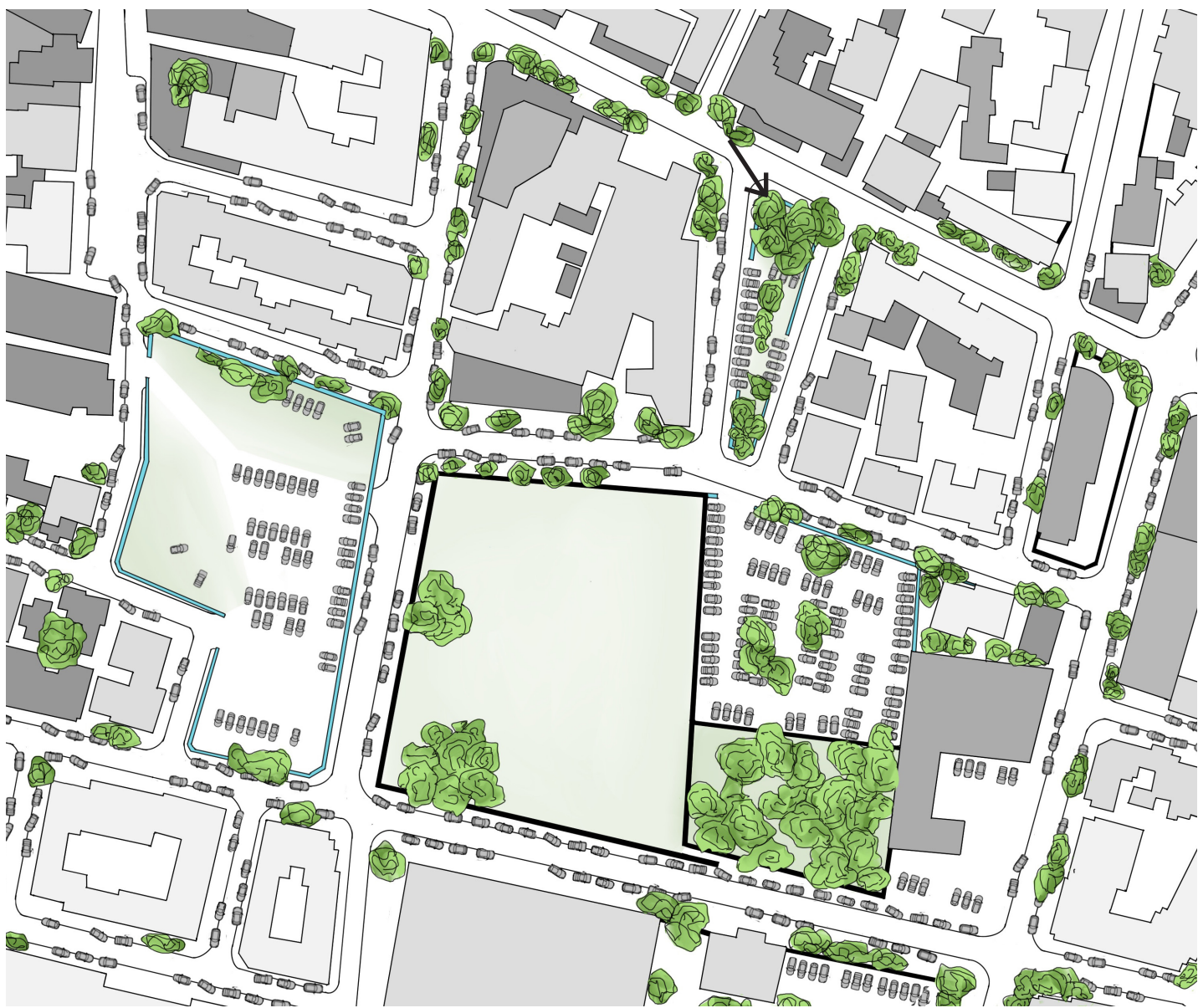
- Green Land
- Trees and Shrubby
- Camps
- Public Inaccessible Government Land
- Public Semi-accessible Government Land
- Private Land
- Informally Occupied Private Land

7.2.3 GREEN (FOREST) & BOUNDARIES

Access to Green Lines is often restricted despite their designation as public space.

In Karantina, park access is limited and temporally controlled, while in Sabra, green spaces have been informally privatised. These conditions reveal how governance and informal practices reshape spatial accessibility, suggesting that regulatory intervention could re-expand the Green Line.

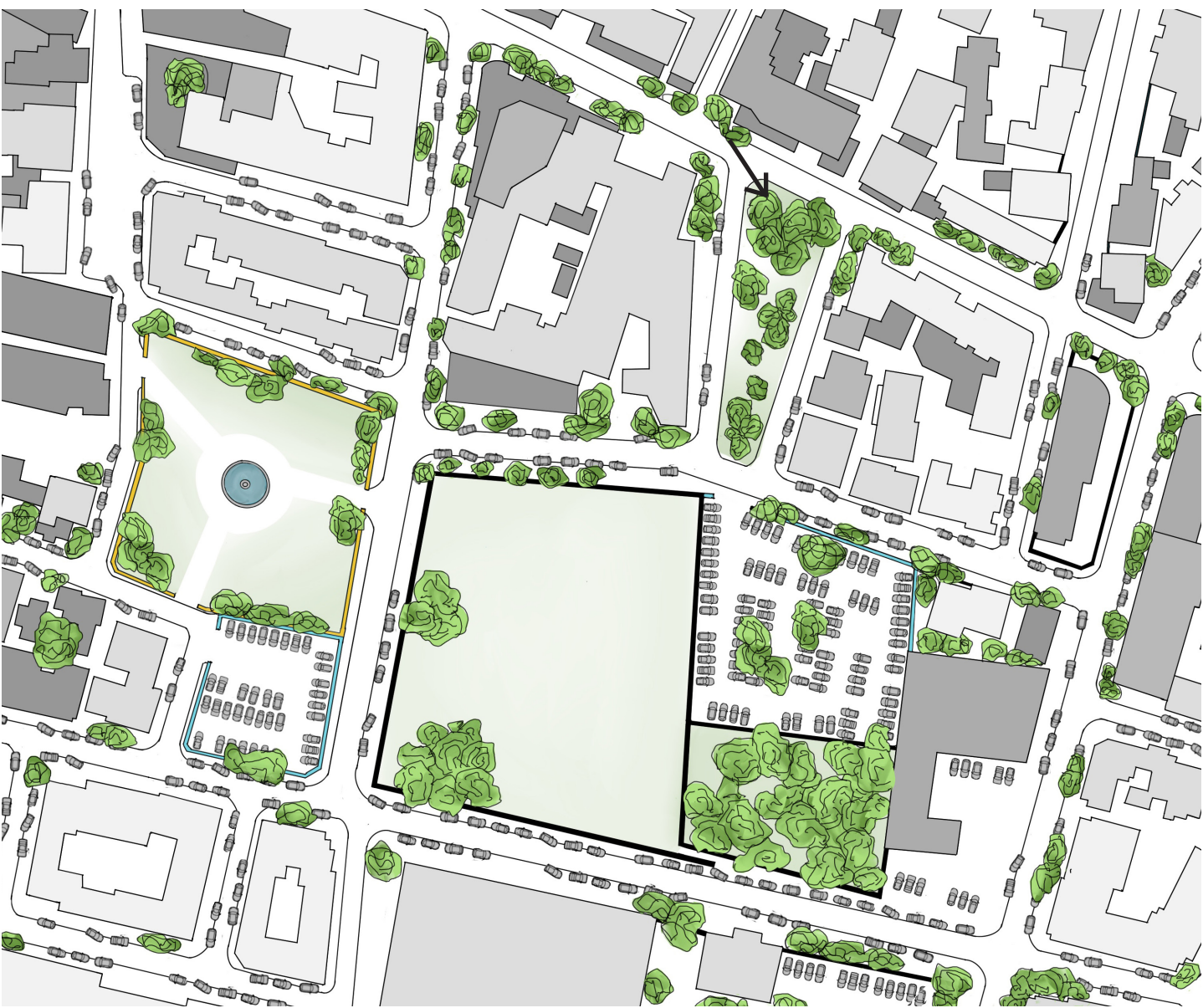
HYPOTHETICAL REWILDING, SABRA



Green Space & Informal Boundries Junction Study as Existing in Sabra, Beirut

1:2,000

- Informally Occupied Private Green Land
- Formally Occupied Private Green Land



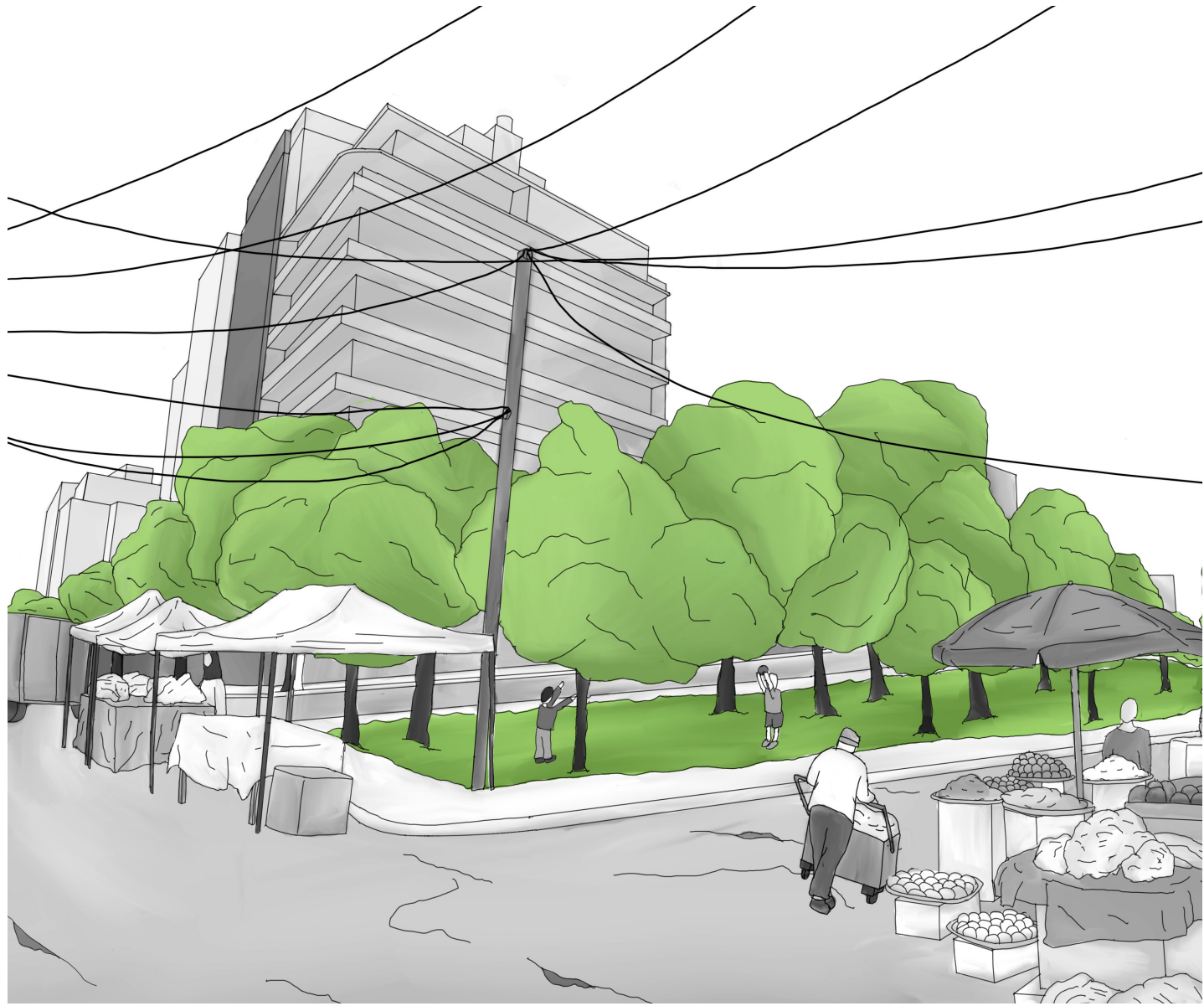
Green Space & Informal Boundries Junction Study as an Imaginary in Sabra, Beirut

1:2,000

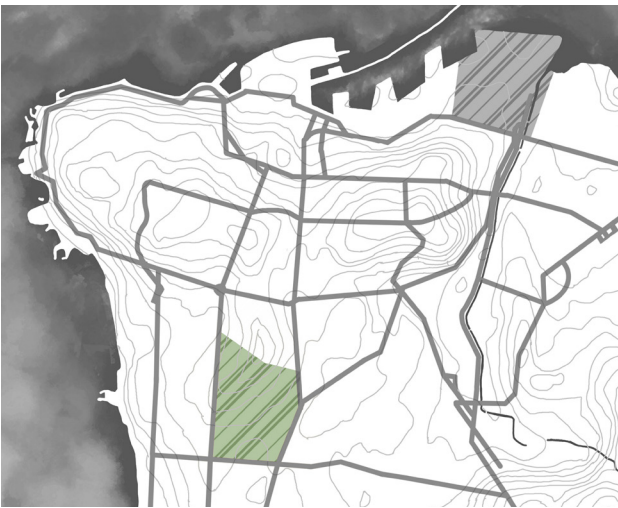
- Informally Occupied Private Land
- Public Semi-accessible Government Land
- Formally Occupied Private Green Land



Green Space & Informal Boundries Junction Study as Existing in Sabra, Beirut



Green Space & Informal Boundries Junction Study as an Imaginary in Sabra, Beirut



Key Map of Sabra, Beirut
1:100,000

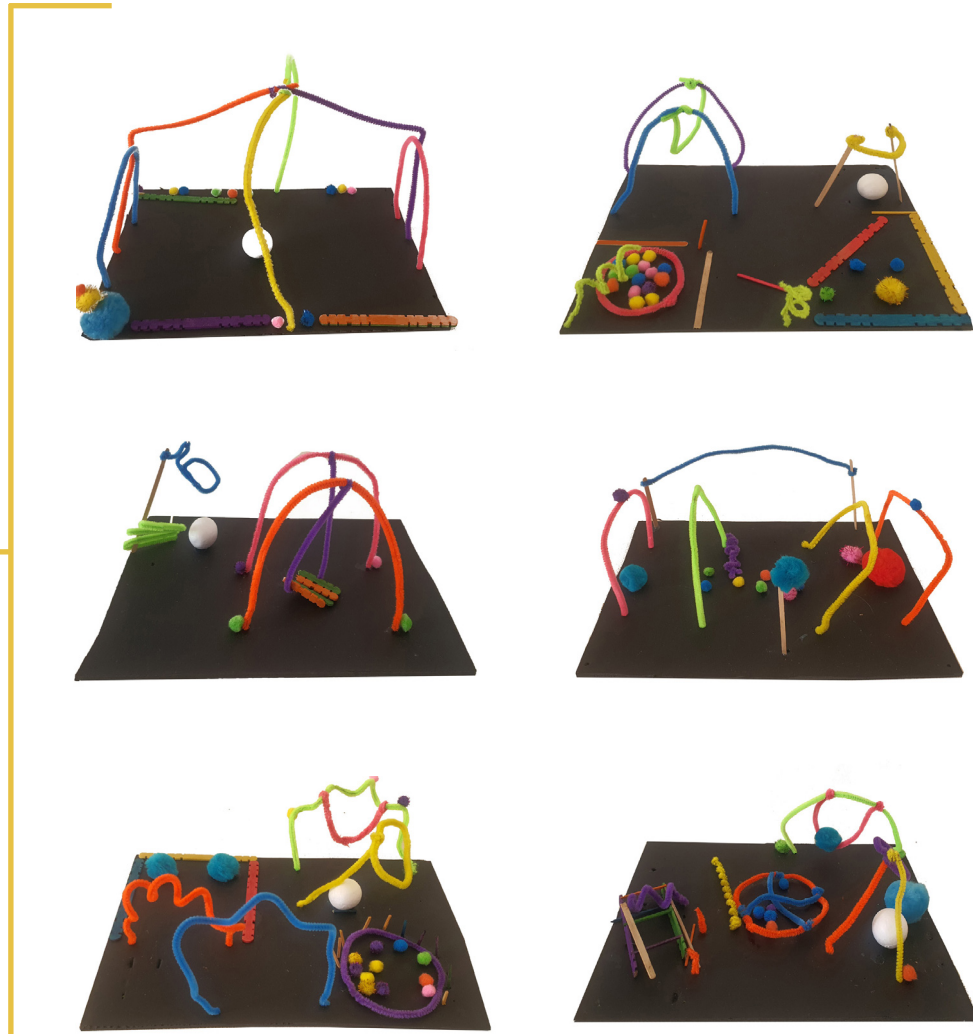
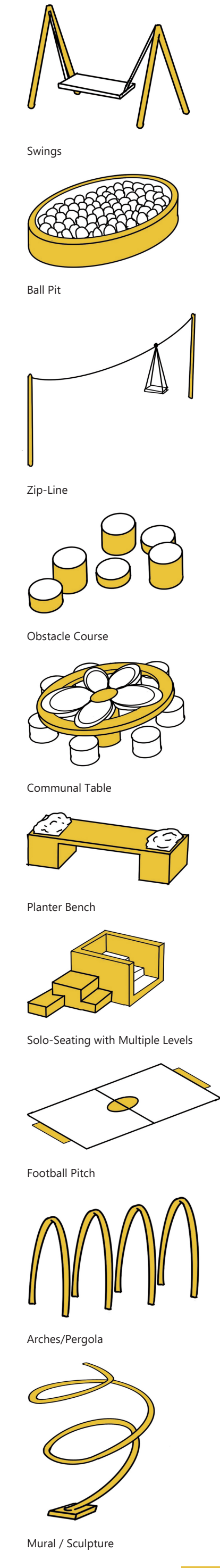
7.3.1 SABRA: A PLACE FOR CHILDREN

The scarcity of child-friendly public space is particularly acute in Sabra.

Through the intersection of Physical and Intangible Lines, patterns of restricted access become visible. This analysis informs a Lines-Based Development Brief, proposing a child-focused public space located near schools.

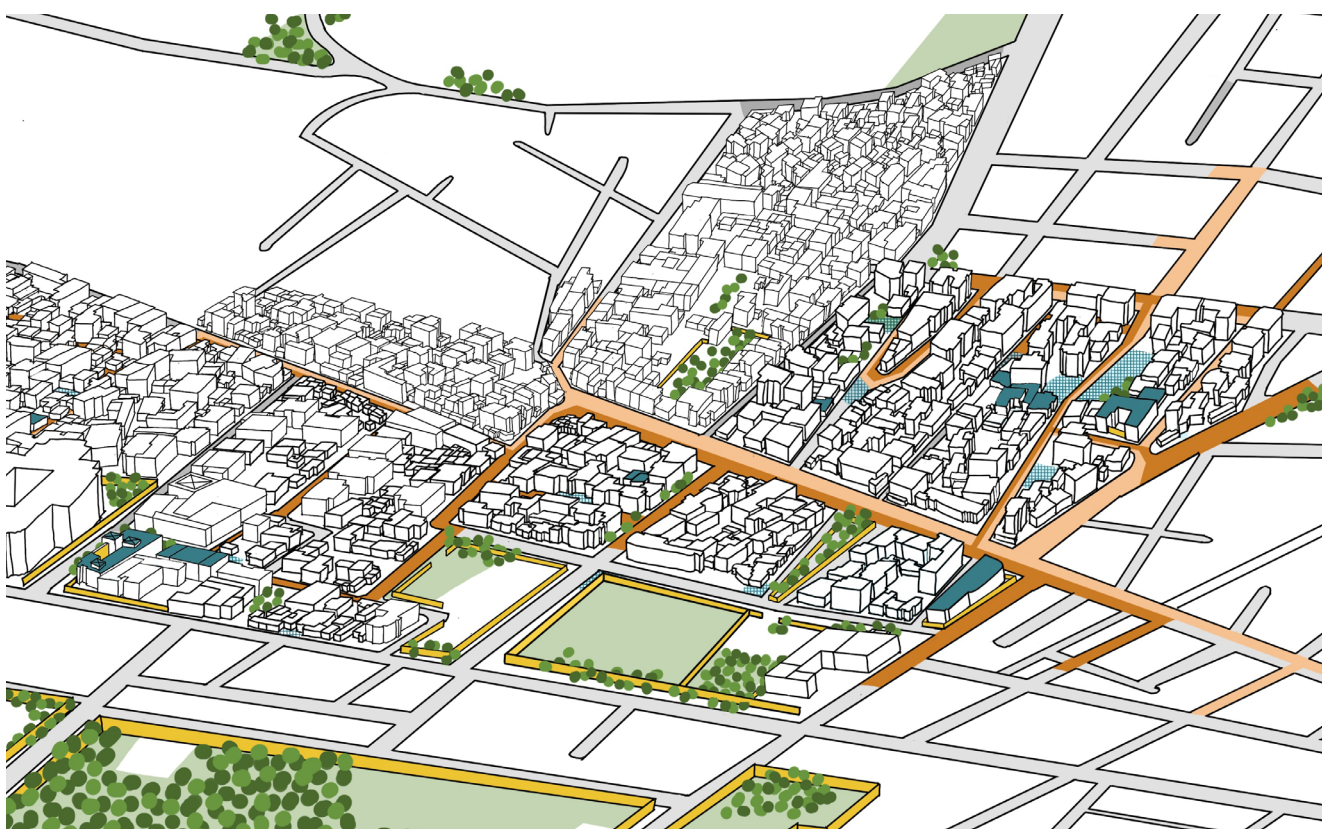
This proposal, developed alongside children's design inputs, results in the conceptual "Space for Children," positioned as an exploratory outcome rather than a universally transferable model.

SHARED URBAN IMAGINARY



Participatory Design Outputs from Workshop 3 - Please refer to *'The Workshop Dairy'*

SOCIAL PATTERNS



Average Spatial Interactions of Children within Sabra, Beirut

- Average Daily Routes of Boys
- Average Daily Routes of Girls
- Existing Informal Play Spaces
- Boundaries
- Green Spaces
- Schools

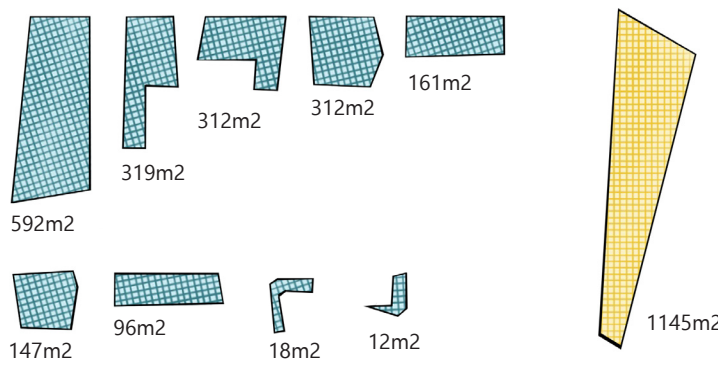
SITE & SCALE



Line Analysis for Site Proposal in Sabra, Beirut

1:4,000

- Schools
- Existing Informal Play Spaces
- Proposed Site
- Routes Between Schools and Proposed Site



Comparative Scale of Existing Informal Play Spaces and Proposed Site
1:2,000

LINES-BASED URBAN DEVELOPMENT BRIEF



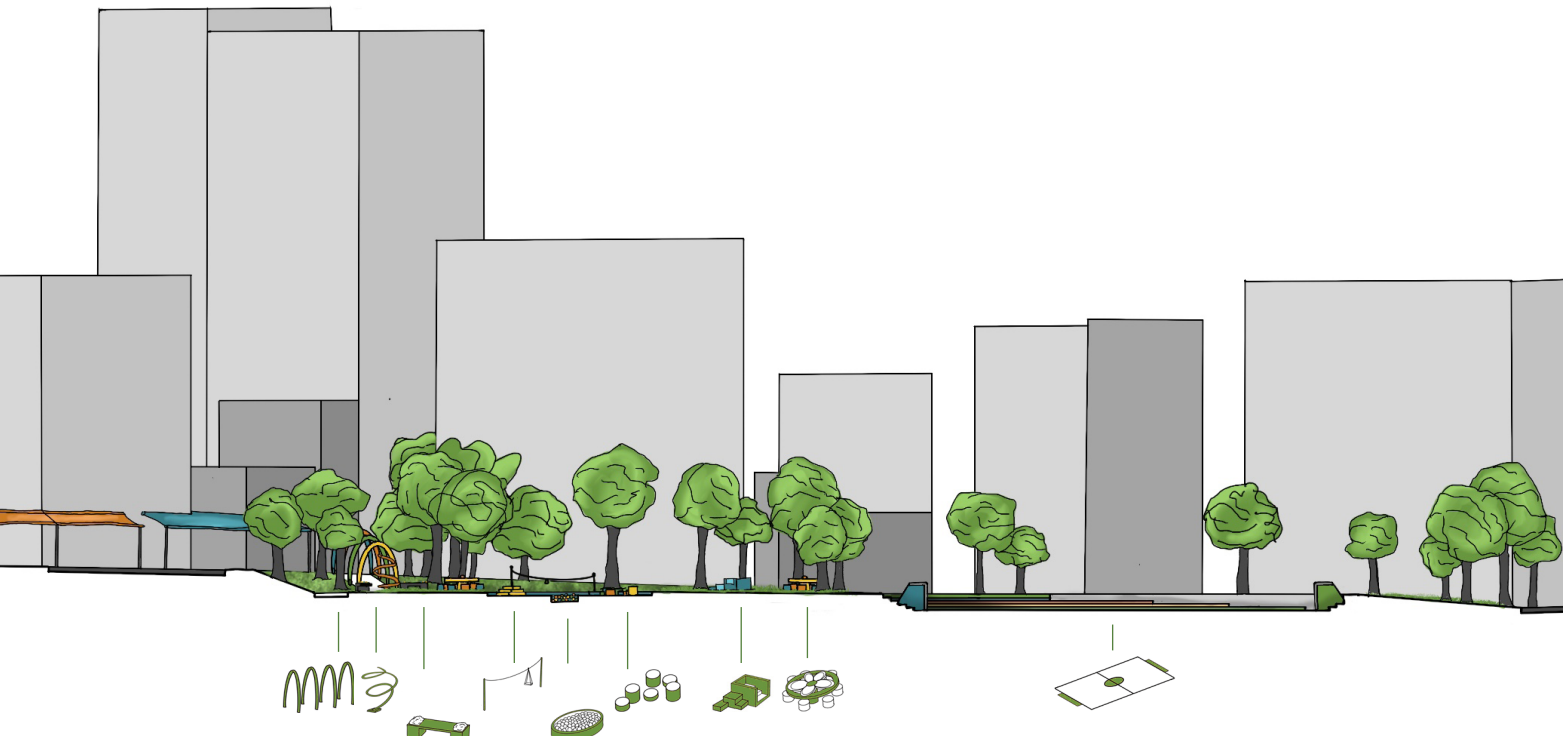
Proposed Site Before Transformative Intervention

1:2,000



Child-Space, Proposed Site After Transformative Intervention

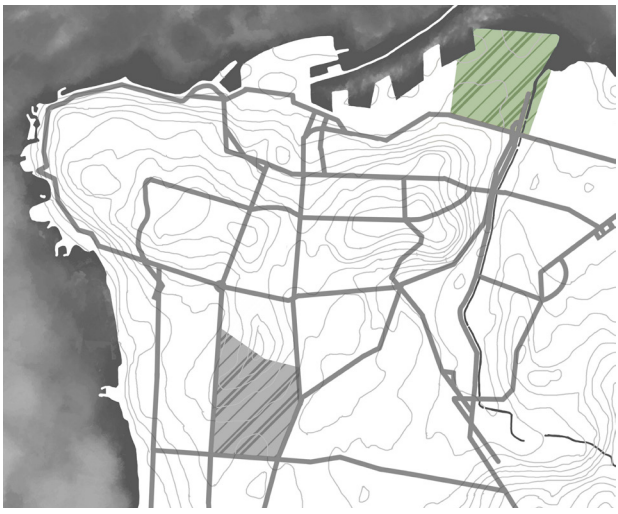
1:500



Child-Space, Proposed Site After Transformative Intervention

1:500

Common Spatial Features of a 'Space for Children' as Designed by Participants - Please refer to *'The Workshop Dairy'*



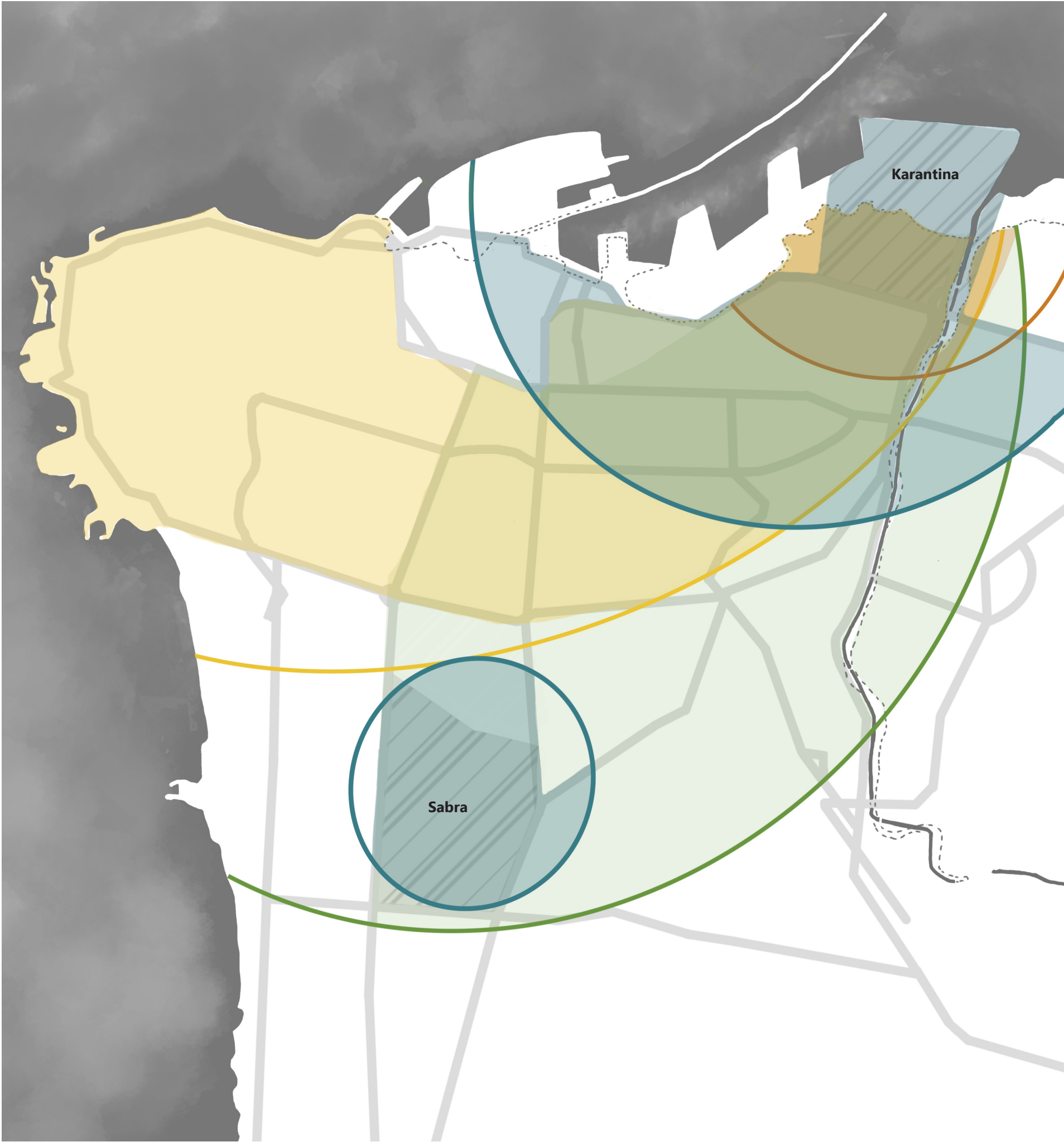
Key Map of Karantina, Beirut
1:100,000

7.2.4 RIVER & EXPERIENTIAL RADIUS

The Beirut River currently functions primarily as infrastructure rather than lived space.

However, when analysed in relation to the Experiential Radius Line - particularly through historical memory - its significance re-emerges. This demonstrates how Transformative Junctions between past and present conditions can inform future urban imaginaries.

COMPARATIVE SPATIAL RADIUS



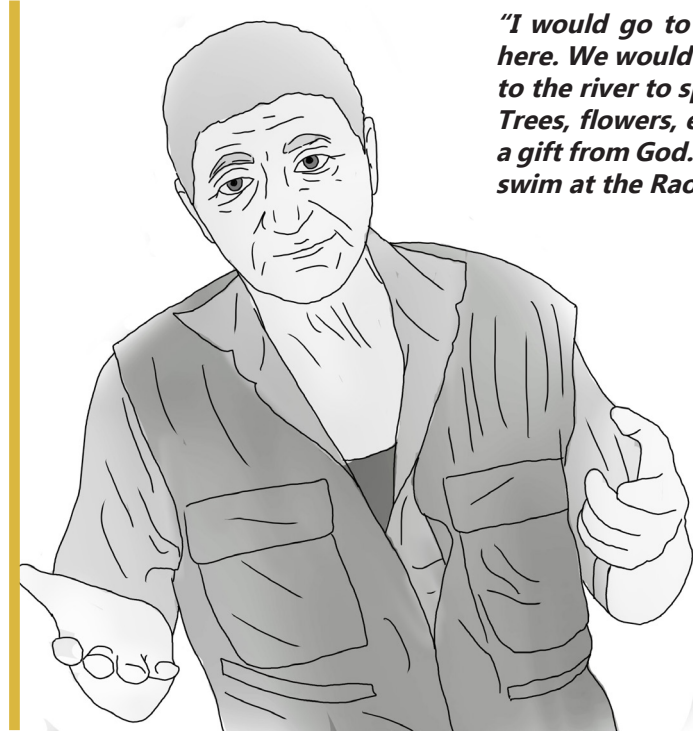
Comparative Historic (1950's) and Current (2023) Experiential Radius of Children in Beirut, Lebanon
1:30,000

- Participant Children's Experiential Radius
- Elder A's Historical Experiential Radius
- Elder B's Historical Experiential Radius
- Elder C's Historical Experiential Radius

HISTORIC ACCOUNTS OF RIVER LINE



Elder A Memory Map of Average Sunday Experience in the 1950's in Karantina, Beirut
1:10,000
Coast Line At Present

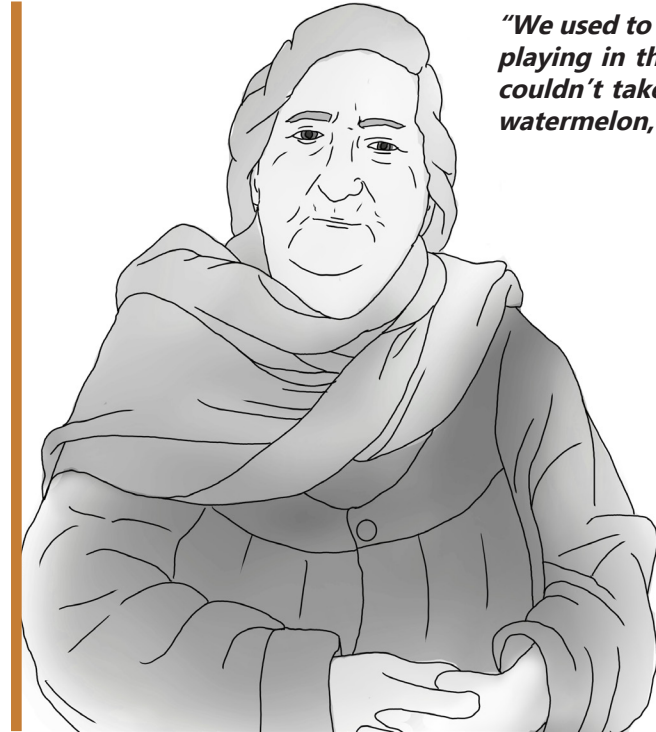


"I would go to my friends' homes, they all lived here. We would get food from our mothers and go to the river to spend the day. It was so green here. Trees, flowers, everything. But the water, that was a gift from God. Sometimes we'd go all the way to swim at the Raoucheh."

Elder A Recalling Average Sunday Experience in the 1950's in Karantina, Beirut



Elder B Memory Map of Average Sunday Experience in the 1950's in Karantina, Beirut
1:10,000
Coast Line At Present

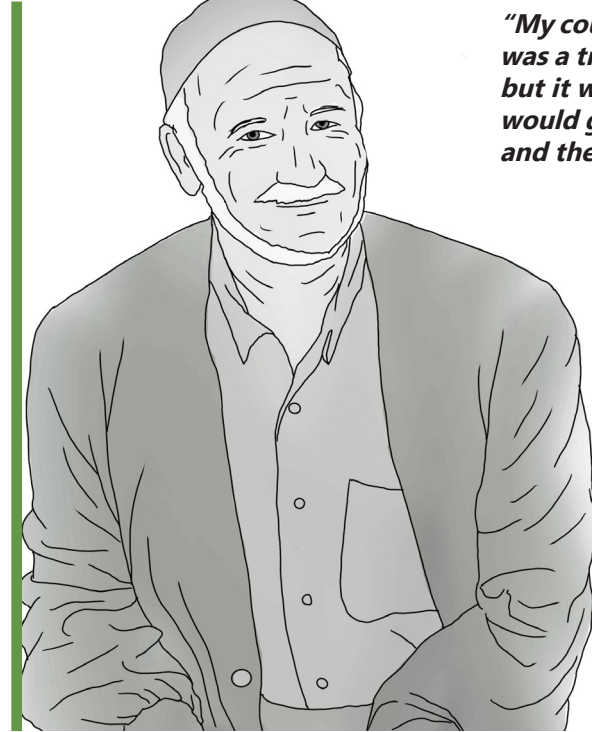


"We used to always when I was young. I remember playing in the water. My parents were poor, they couldn't take us anywhere else. They would get a watermelon, and cool it in the river water."

Elder B Recalling Average Sunday Experience in the 1950's in Karantina, Beirut

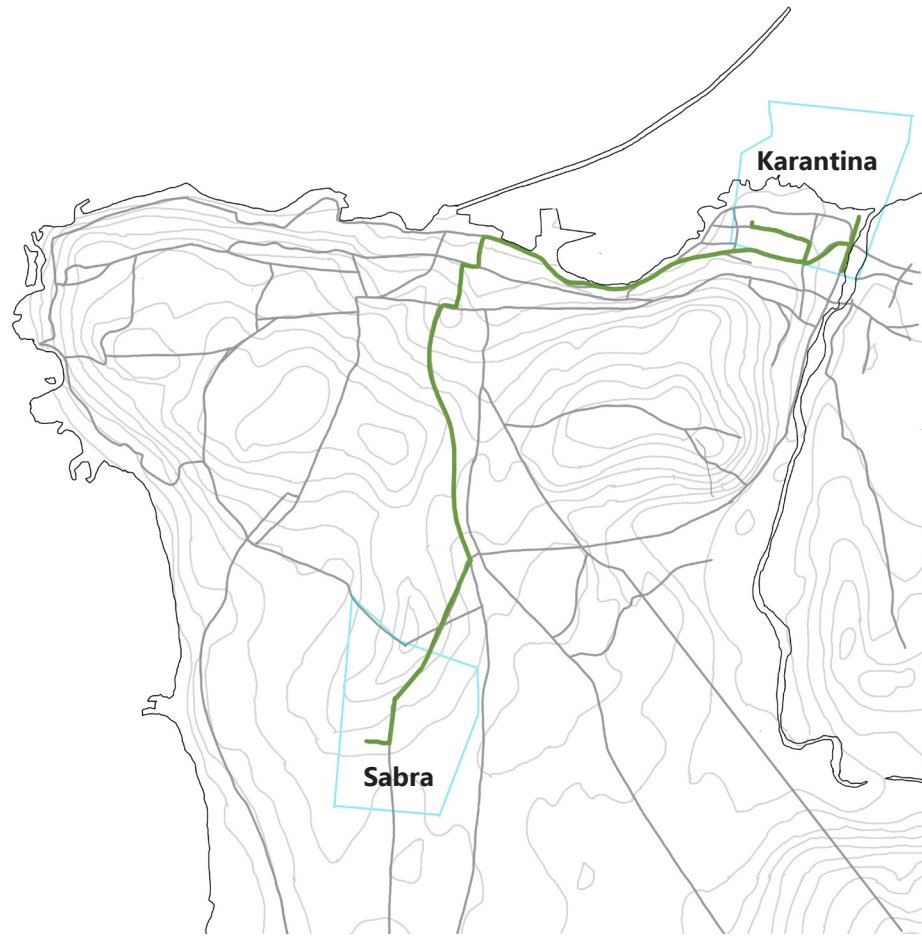


Elder C Memory Map of Average Sunday Experience in the 1950's in Karantina, Beirut
1:10,000
Coast Line At Present

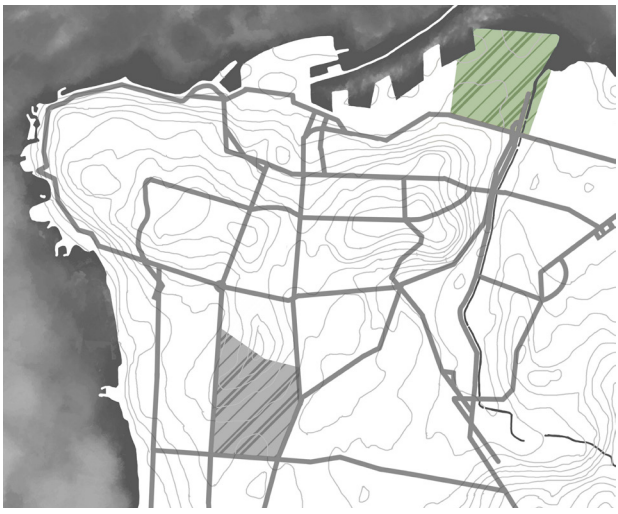


"My cousins used to come from East (Beirut). There was a train then. Sometimes we would go to them, but it was more fun here. The beach, the river. We would go to theirs on Eid. When the train stopped, and the river... it was difficult."

Elder C Recalling Average Sunday Experience in the 1950's in Karantina, Beirut



Experiential Radius of Elder C Average Sunday Experience in 1950's Beirut, Lebanon.
1:50,000
Journey as Described by Elder C through Beirut, Lebanon
Site Boundries At Present



Key Map of Karantina, Beirut

1:100,000

7.3.2 KARANTINA: WIDENING THE RADIUS

Flooding presents an urgent urban challenge in Beirut, with Karantina among the most affected areas.

Its proximity to the river creates an opportunity to strategically activate the River Line as part of a site-specific intervention. Proposed strategies include ecological restoration, infrastructure upgrades, and the introduction of a riverwalk park. This initiative could reintegrate the River Line into the local community's Experiential Radius and urban fabric.

This proposal illustrates how intersecting lines can inform context-specific, prototype interventions, reinforcing the toolkit's role as an exploratory analytical and design framework rather than a generalised solution.

SHARED URBAN IMAGINARY

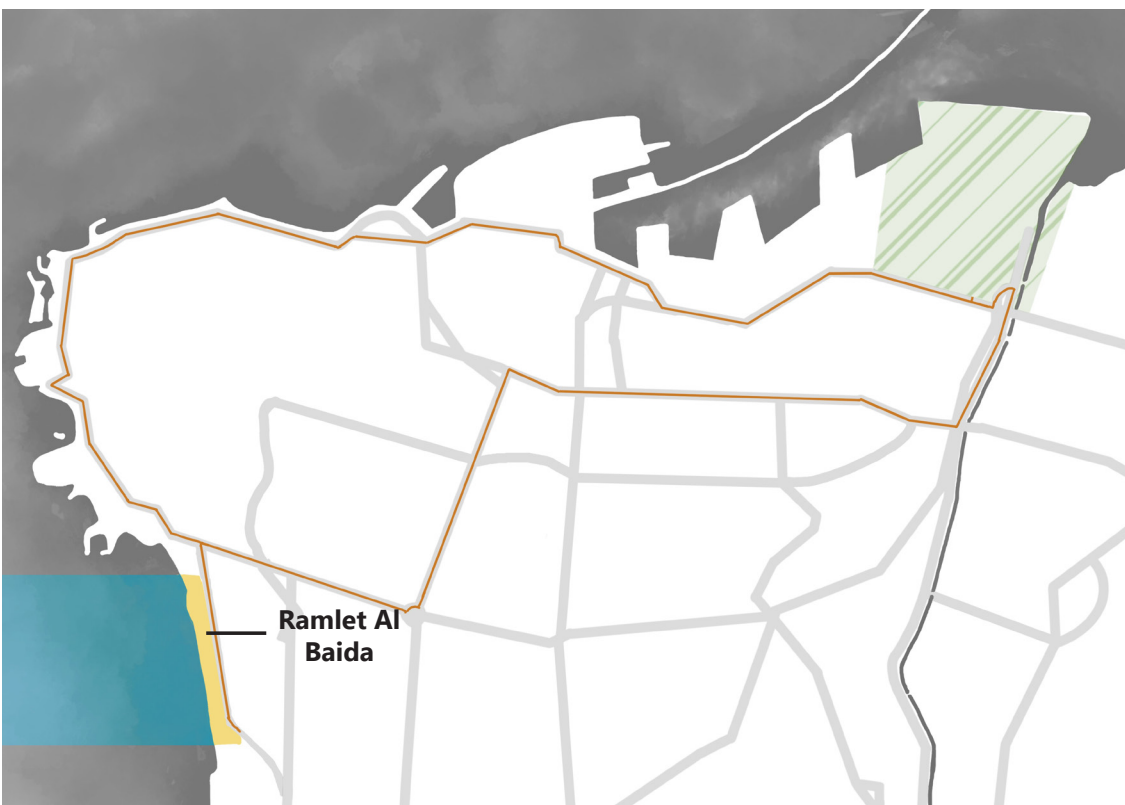


Aspiration of Wider River Bed
Aspiration for New Topography

1:10,000

Representation of Reintroduction
Natural River Edge as a Potential
Public Space

SOCIAL PATTERNS

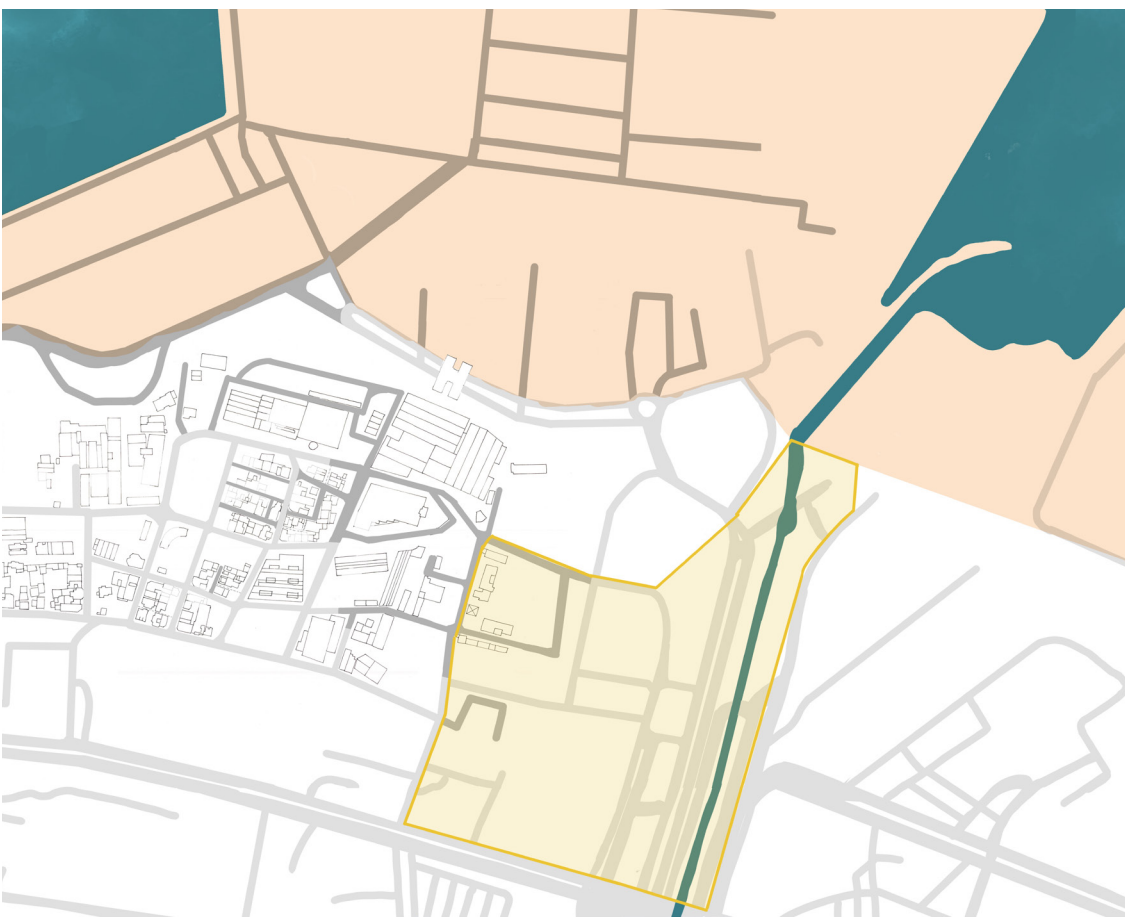


Public Coast
Publicly Accessible Natural Waterway
Journey Routes to Closest Public Waterway

1:50,000

Journeys to Closest Public Natural
Waterway in Beirut for Karantina
Residents

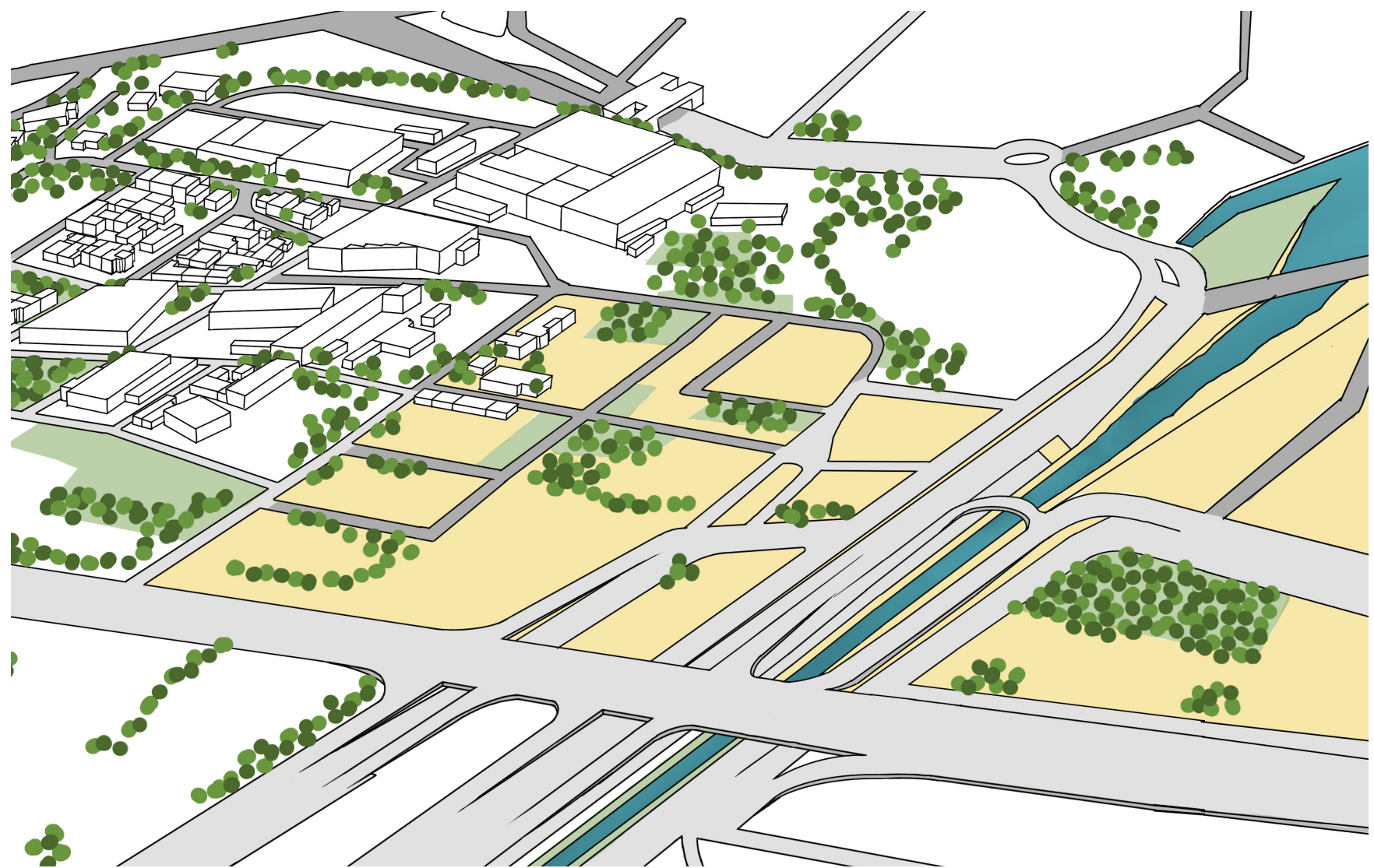
SITE & SCALE



Proposed Site of Urban Development Brief
Port of Beirut

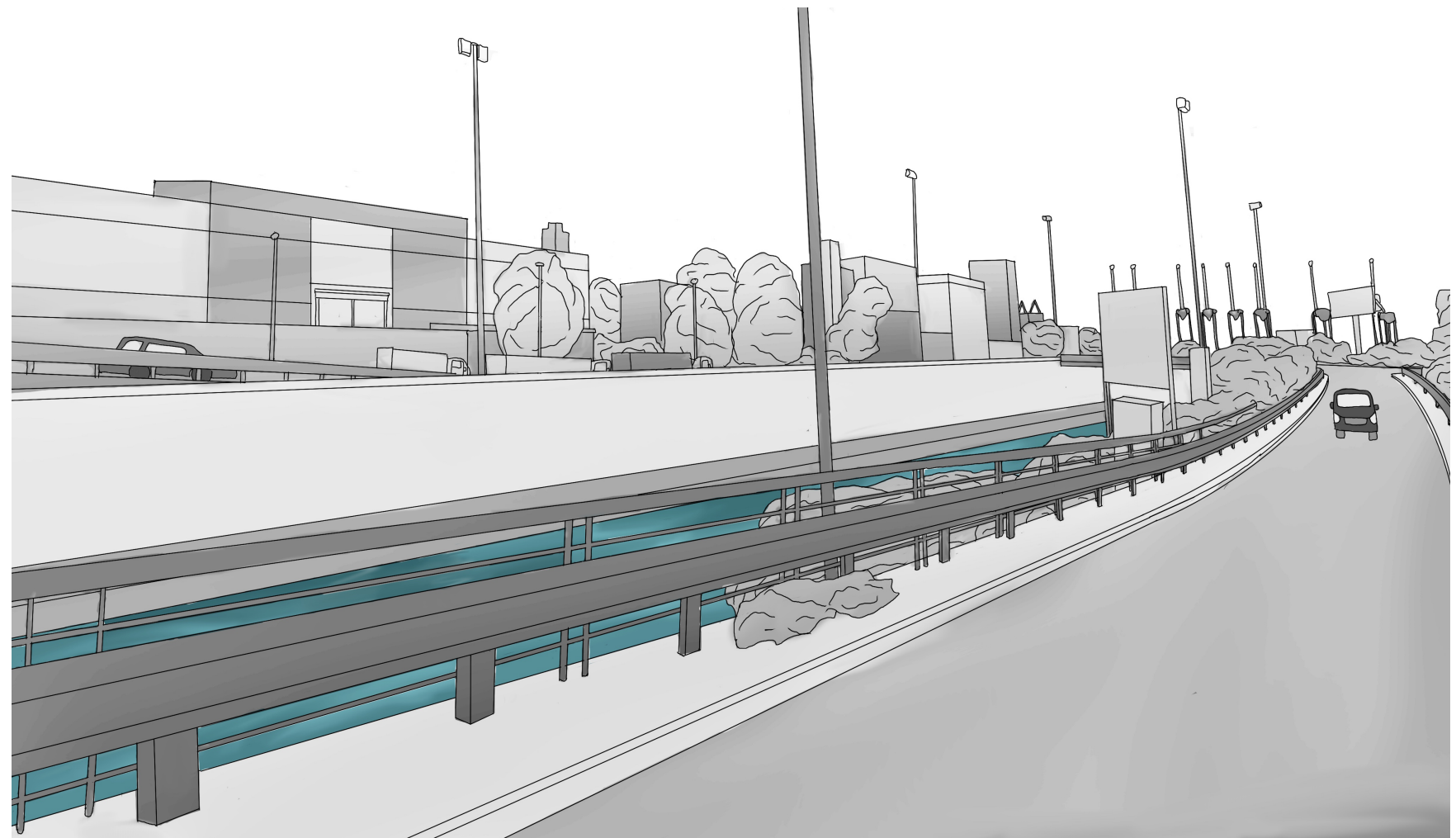
1:10,000

Proposed Site and Scale,
considering Access to Potential
Public River Through Karantina



Proposed Site Before 'Widening the Radius' Transformative Intervention in Karantina, Beirut

Proposed Site
River & Coast Line
Green Line
Primary Vehicle Routes
Primary Pedestrian Routes
Private Routes

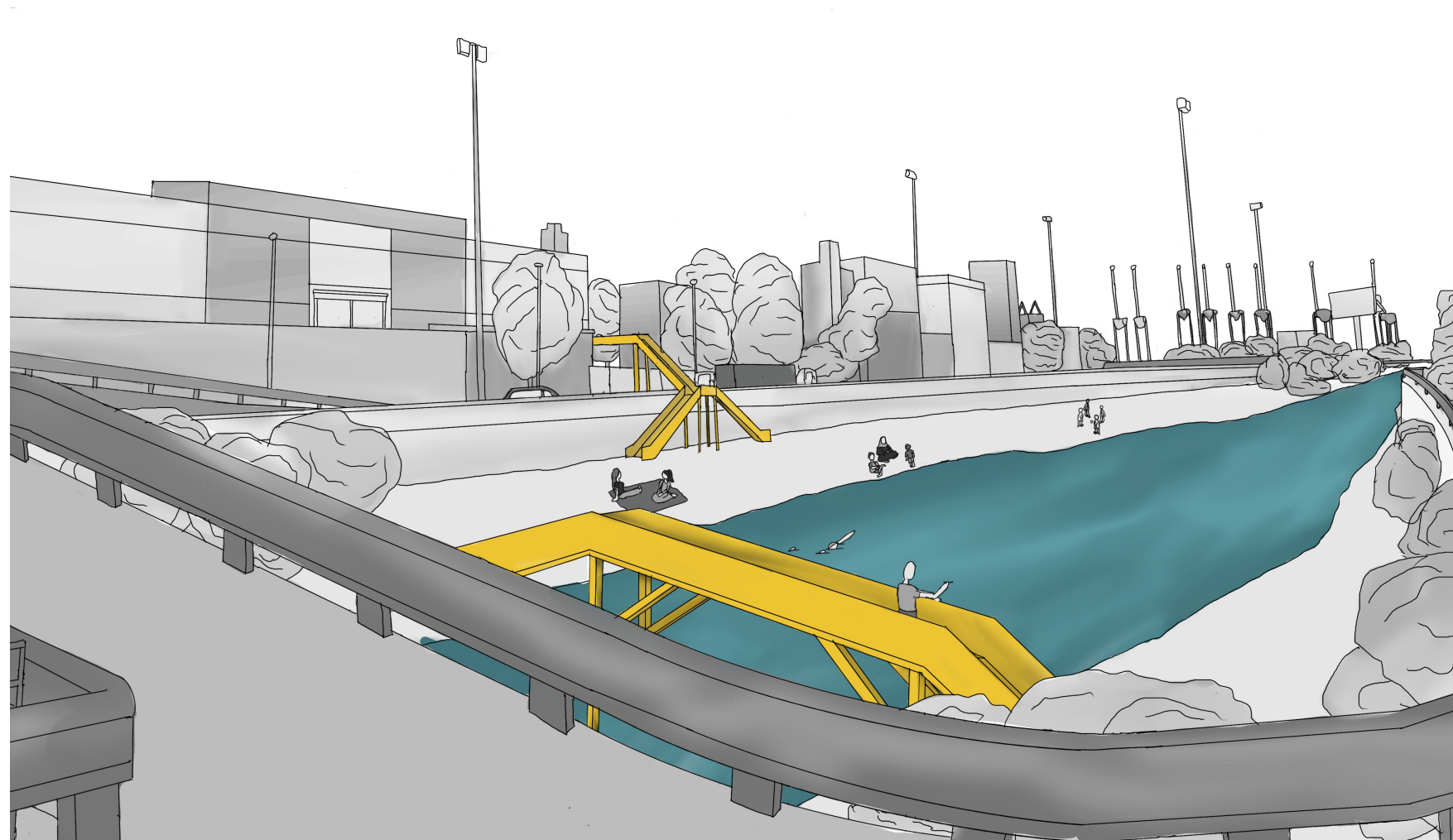


Proposed Site Study Before 'Widening the Radius' Transformative Intervention in Karantina, Beirut



Proposed Site After 'Widening the Radius' Transformative Intervention in Karantina, Beirut

Proposed Pedestrian Highway
Proposed Public Riverside,
Sand & Gravel Deposit
Re-excavate River & Coast Line
Expanded Green Line
Primary Vehicle Routes
Primary Pedestrian Routes
Private Routes



Proposed Site Study After 'Widening the Radius' Transformative Intervention in Karantina, Beirut