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fig 4.1. Panoramic photograph from Ponte city parking ramp towards Johannesburg CBD. Site under investigation on the left. (by Author, 2015)

fig 4.2. Context mapping illustrating site in relation Gillian, Marzanne and Pieter with whom the author shares a ridge framework. (by Author, 2015)

fig 4.3. Larger context map illustrating site in relation to prominent landmarks in area. (edited by Author, 2015)

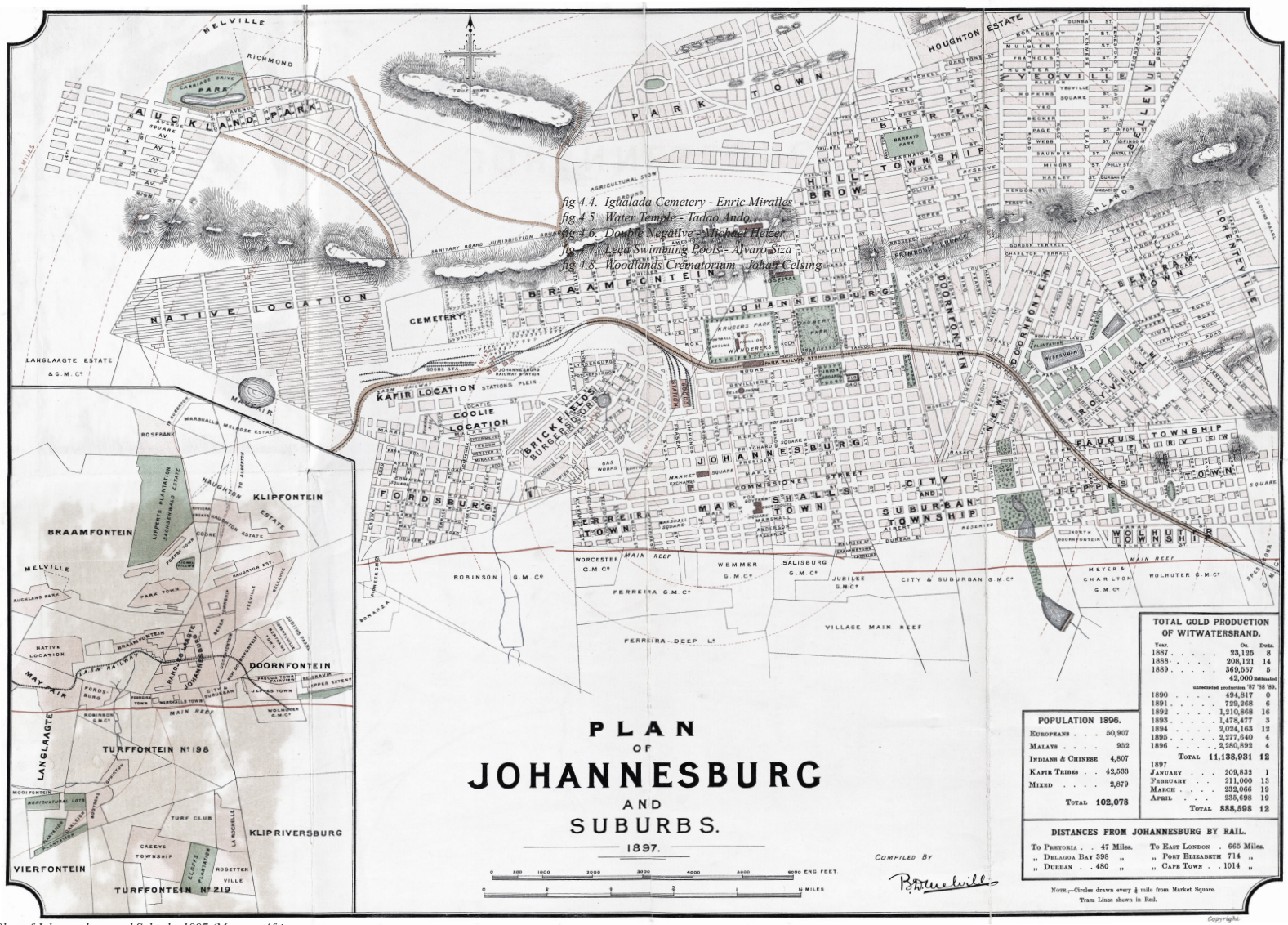

fig 4.4. Igualada Cemetery - Enric Miralles
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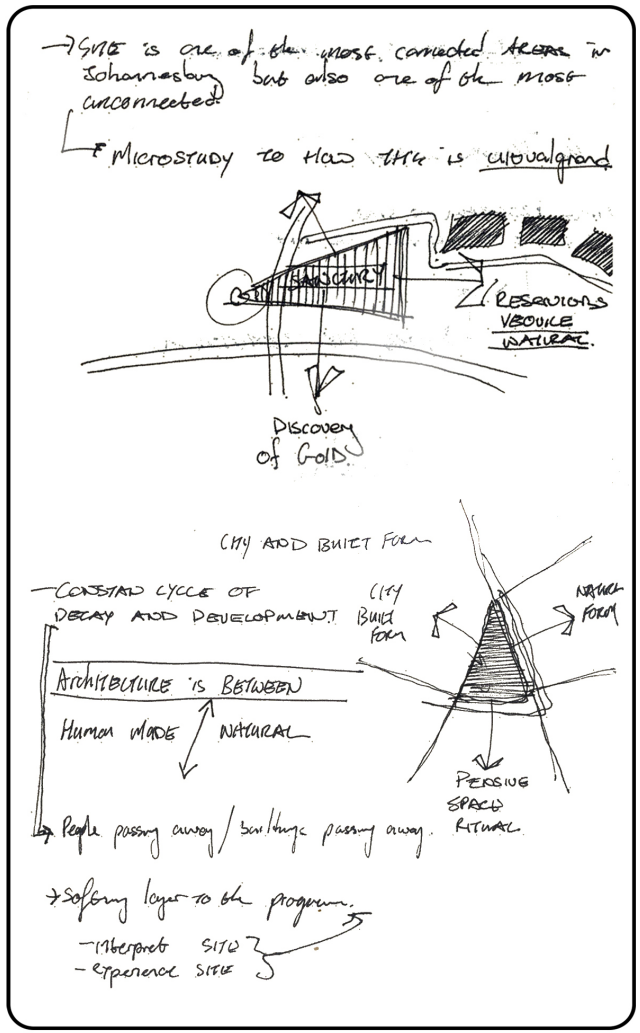
(by Author, 2015)

Background and Delimitations

For the purpose of this dissertation, the site will be analysed in relation to other koppies within the greater Johannesburg area. These will be viewed as areas of significance that carry importance within the city as uninhabited natural landscapes. Also, studies will be made regarding cemeteries in Johannesburg as boundary-defining elements that show the urban sprawl of the city. Thus Melville Koppies will be studied as a natural koppie within Johannesburg that borders a residential housing area as well as one of Johannesburg's largest cemeteries, Westpark Cemetery.

Yeoville Koppie as Uitvalgrond



Yeoville Koppie forms part of a larger series of ridges within the environs of Johannesburg. It is situated on the westernmost edge of Observatory Ridge, opposite Ponte City. Yeoville Ridge forms part of the greater and more well-known Witwatersrand on which Johannesburg was founded. The geological development of the ridge over time has informed the planning development of Johannesburg, making it a pivot point for the future development of the city. When one looks at the ridge and its surroundings, it becomes clear that it forms a physical barrier between old Johannesburg (the CBD) and new Johannesburg (the northern suburbs). The ridge as barrier developed as a result of its geological nature; it mostly consists of granite rock and bounded iron ore, and is densely vegetated with Highveld grasses and Eucalyptus saligna.

The ridge has two main characteristics. Firstly, it is seen as an area of isolation within Johannesburg, an area where solitude and calmness can be experienced. The top of the ridge, like Melville Koppies, is a space where people from various spiritual groups gather for meditation, to find calmness and solitude. The ridge has a strong spiritual sense surrounding it. It allows the user to feel connected with the being of the city, providing enough distance between the hustle and bustle of the street to focus and find spiritual relief.

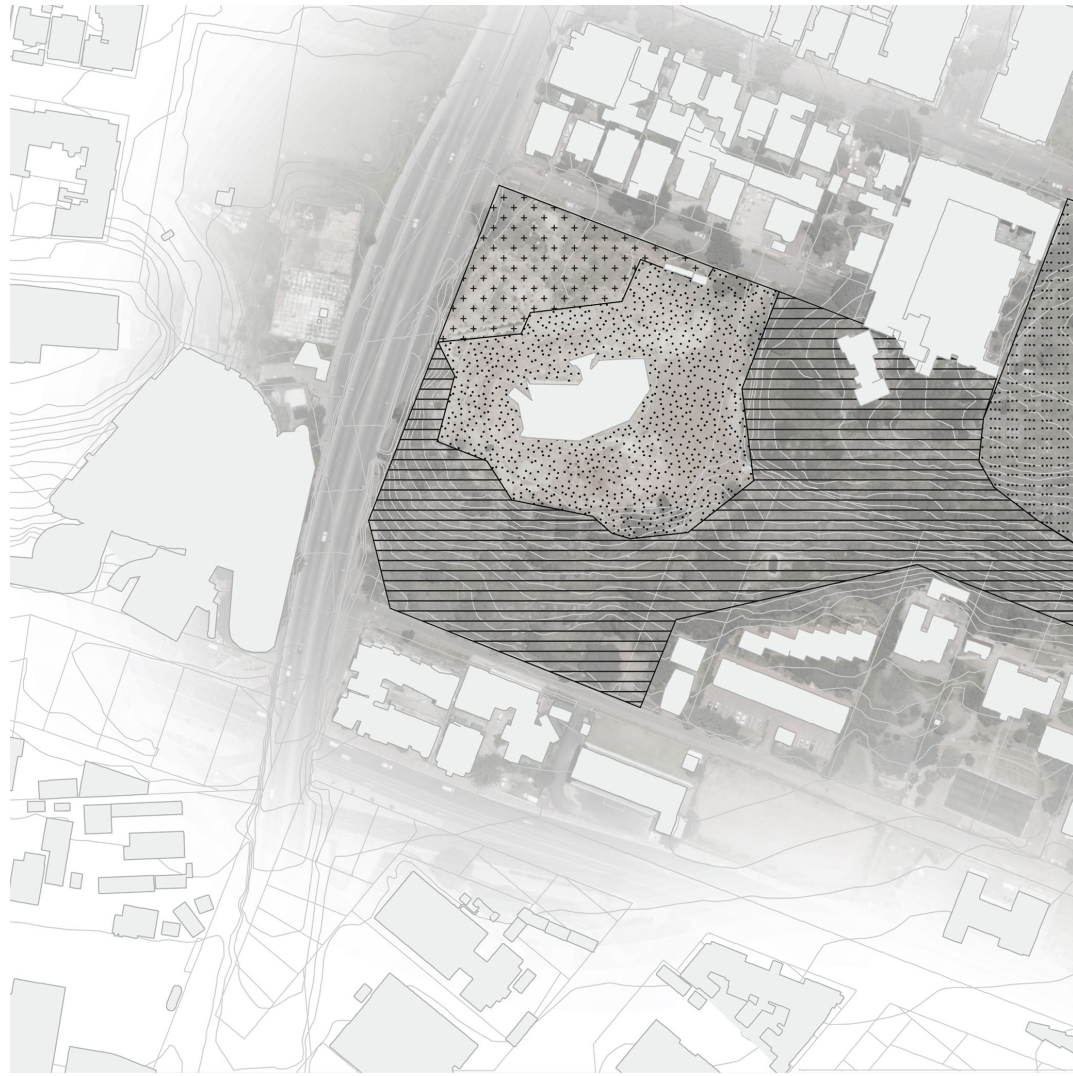
The Isolation of the ridge is the result of its steep topography, making it virtually impossible for city dwellers to access and move across it. Most of the site boundary is closed off by residential boundary walls.

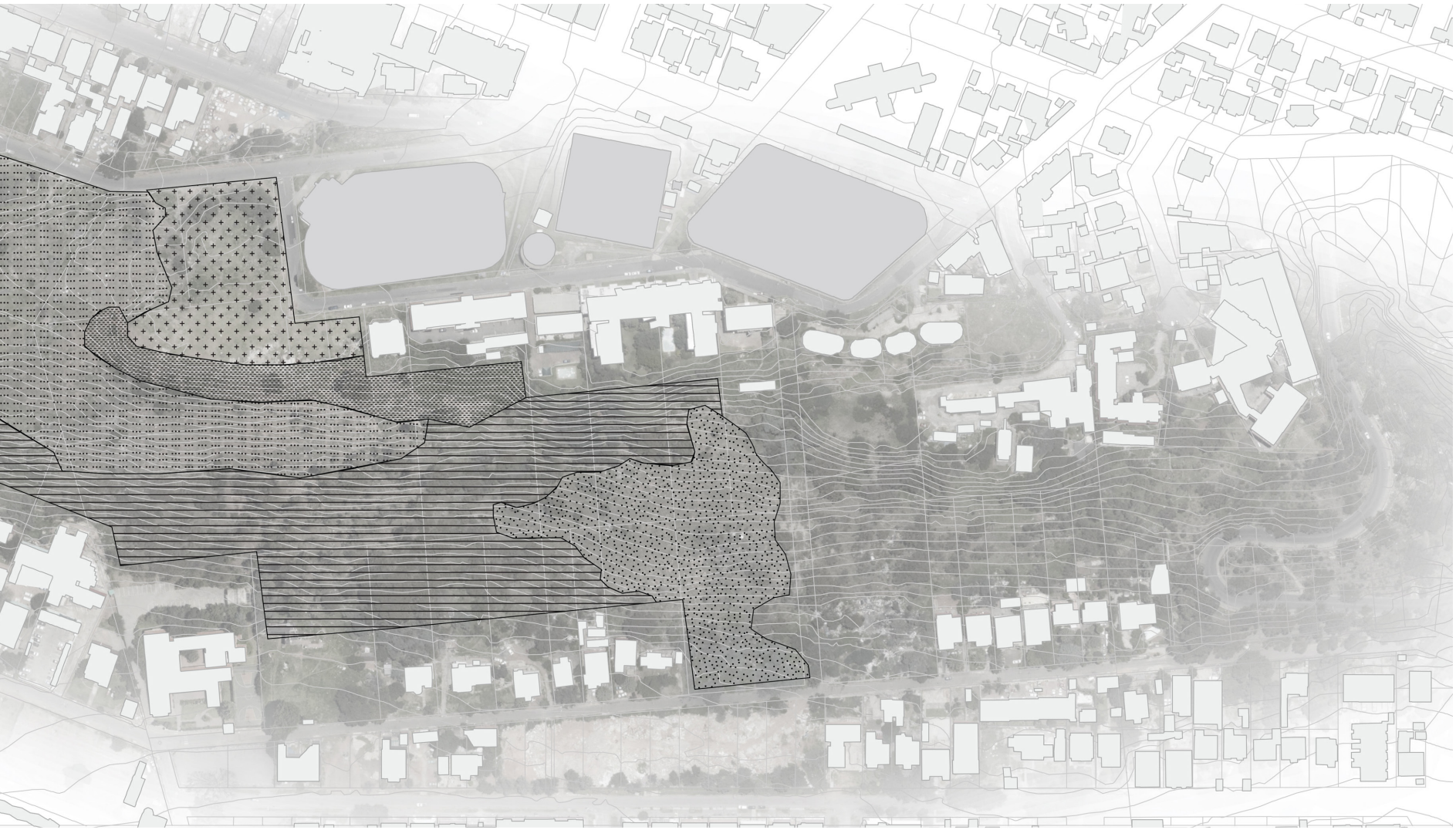
Secondly, the ridge forms part of a series of green spaces within Johannesburg. Densely covered with veld grass and invasive bluegum trees, the ridge acts as a green belt flowing into the city. Its visibility from vast distances pleads for an architecture that grants accessibility and that respects the surrounds through sensitivity and a deeper, more abstract understanding of site and program.
The nature of the site begs for a typological response that grants both access and isolation whilst maintaining the natural character of the site – a piece of uitvalgrond that has been forgotten in time; a piece of land that has been discarded and left unkempt.

Natural Ridge Condition

The koppie itself plays host to three main natural phenomena: densely vegetated Highveld grasslands, invasive Eucalyptus saligna trees, and rocky outcrops along the steeper slopes of the ridge. The grasslands are divided by the long rocky outcrops which seem to divide the ridge into upper and lower sections. Along with an understanding of the hydrology and topography of the site, it is clear that on steeper sections of the ridge a more rocky natural soil condition is visible, while the Eucalyptus saligna trees grow in large groups on lower terraces of the ridge where water is able to collect.

fig 4.27. Mapping showing relationship between various ridge conditions. Conditions such as: Vegetated, Grassland ,Rocky ,Exposed soil ,Unkempt lawn





Edges and Boundaries

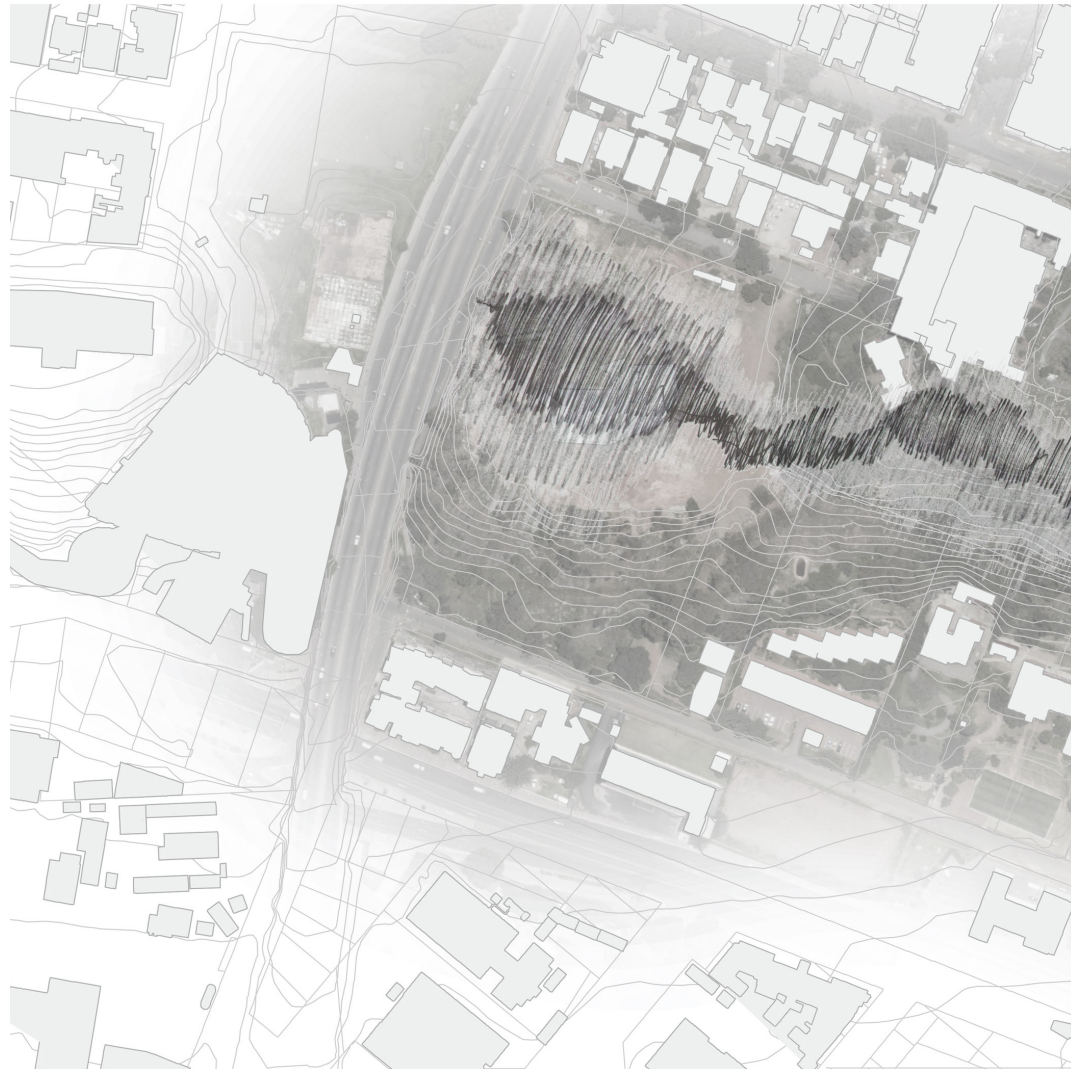
The edge conditions of the Yeoville Ridge vary greatly, from being enclosed by residential boundary walls to the south, to openly touching the street on both the northern and southern corners. The northern site boundary of the ridge merges from fully enclosed boundary walls into an open edge along Percy and Highlands Streets, while on the southern edge of the ridge, along Hunter Street and Gordon Terrace, the site is inaccessible for the majority of its length, except for two large vacant pieces of land. The edges of the site are characterised by densely vegetated grasslands and Eucalyptus saligna trees, and the naturally steep hillside. These characteristics help to contribute to the isolated spiritual character of the ridge and chosen site. The edge conditions limit the interaction between the ridge and the street at Hunter Street, Gordon Terrace, Percy Street and Joe Slovo Drive. Because of vacant pieces of land on the southern boundary, and direct street access on Highlands Street and, more importantly, South Lane, strategic controlled points of access can be granted onto the site.

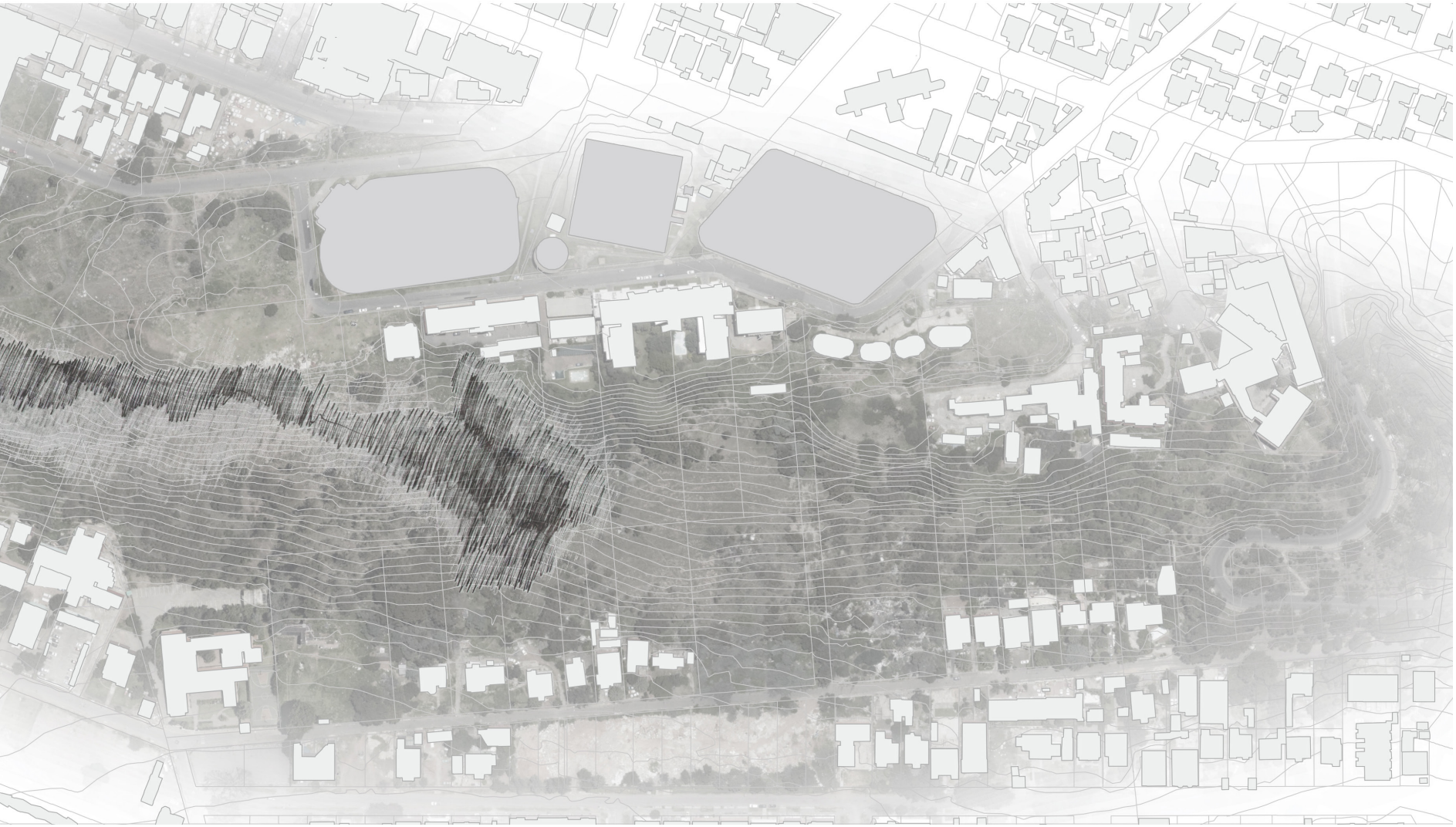
fig 4.28. Mapping showing boundary conditions of site. Condition such as: natural and man-made walled boundaries, open grassland, and gated sections

Site Development Potential

By understanding the site from a historical viewpoint and taking into consideration its natural condition, a potential development of the site finds itself situated between man and nature, between old and new Johannesburg, between life and death of man and city, and between fantasy and fragment. Across the entire site the potential exists to make a once inaccessible ridge accessible to city dwellers, not as urban space but as a liminal condition between natural and built. This also allows for structures to make use of the natural rock within the ridge, as a counterweight to man-made structures protruding from it.

fig 4.29. Mapping showing development potential based on site visits, mapping and understanding of programme

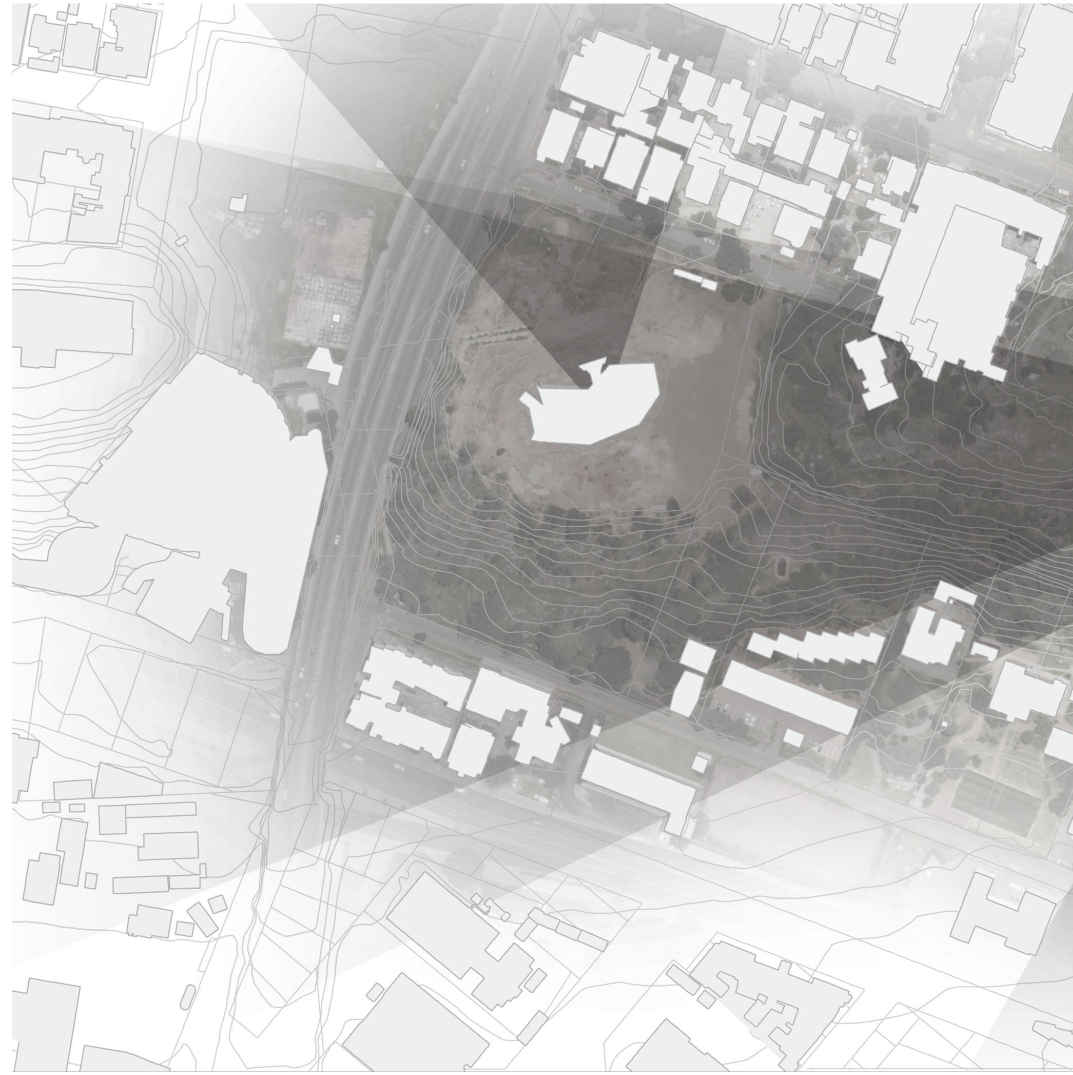


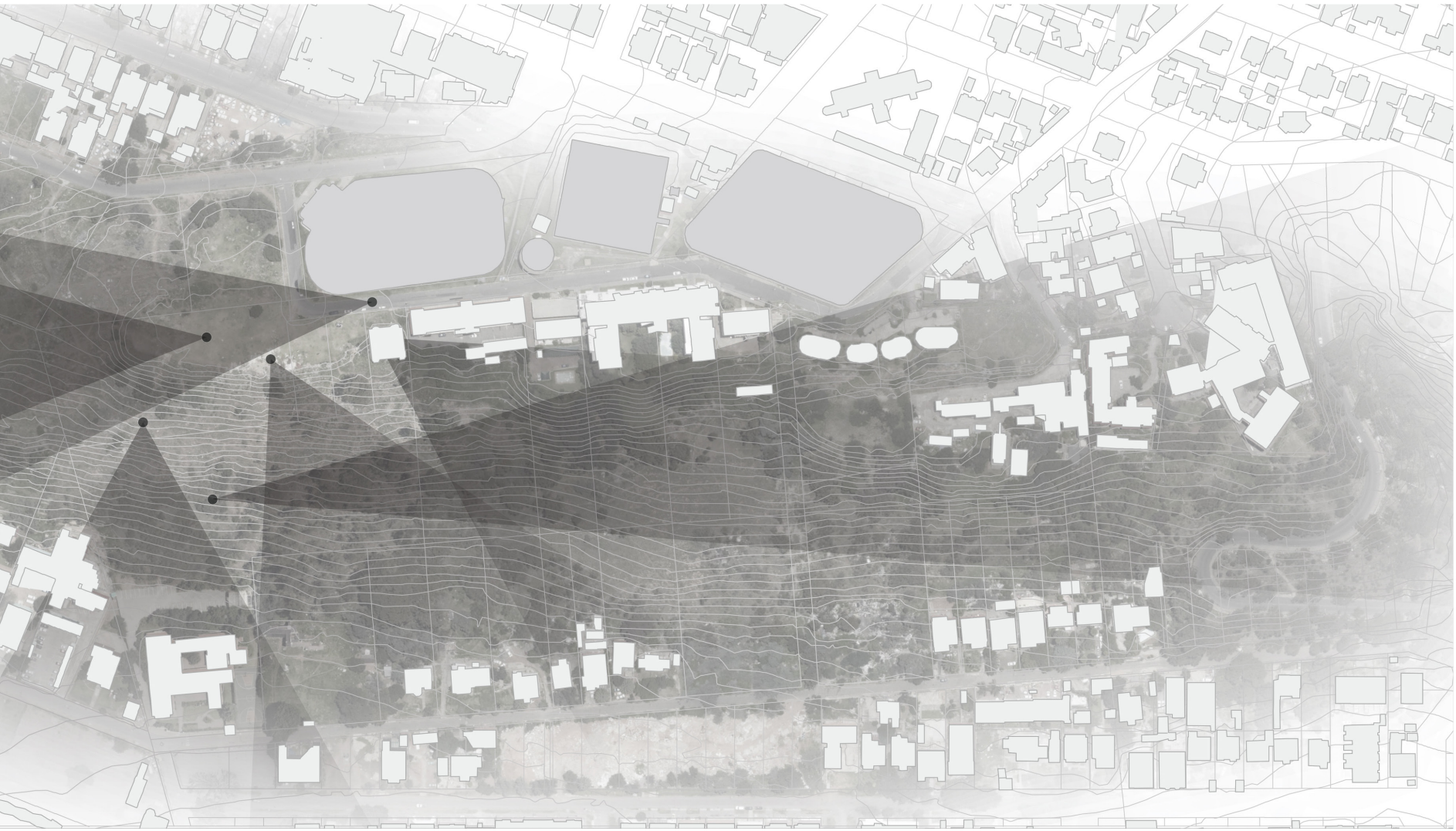


Sight Line Analysis

The Yeoville Koppie forms part of the greater Witwatersrand. The ridge itself extends throughout the city, providing spectacular views. This koppie, which becomes part of Highlands and later Observatory hill, is the second highest koppie on the Witwatersrand. Because of its location within the city, Yeoville Koppie allows for spectacular views of the city from a perspective not available from Observatory hill. Whilst walking along the ridge one is able to direct views towards points of interest in the greater Johannesburg context. From Ponte City towards Observatory hill the ridge curves, allowing for views of the mine dumps and sister ridges to be exposed while views of Joe Slovo Drive and Hillbrow diminish around the corner. The character of the site can be experienced through its sight lines as the distance and disconnection from the city is visible by viewing from an isolated distance.

fig 4.30. Mapping of sight lines from and across site towards important landmarks such as Johannesburg CBD, Troyville koppie, Observatory ridge, mine dumps and goldfields, Ponte City and the Hillbrow tower.

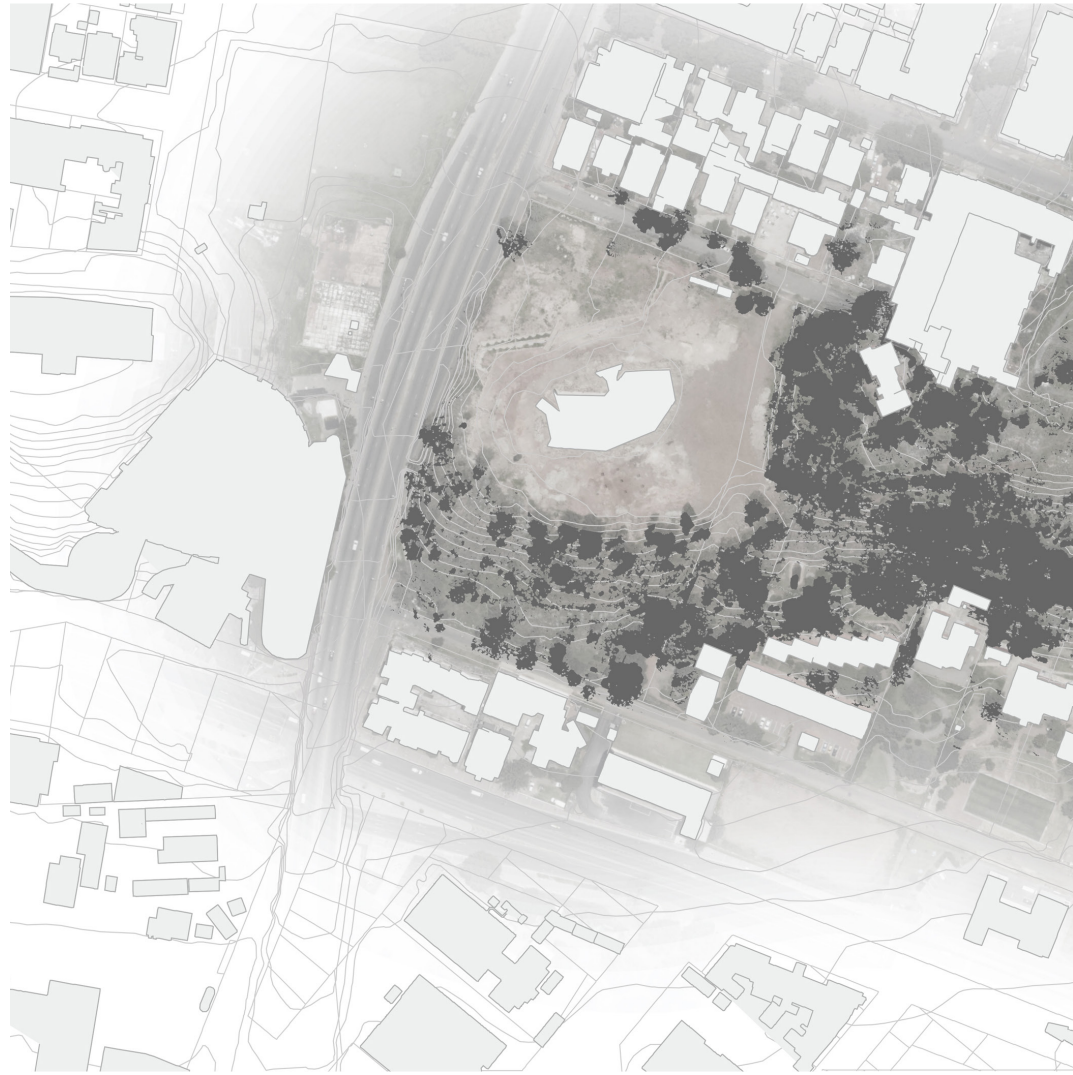


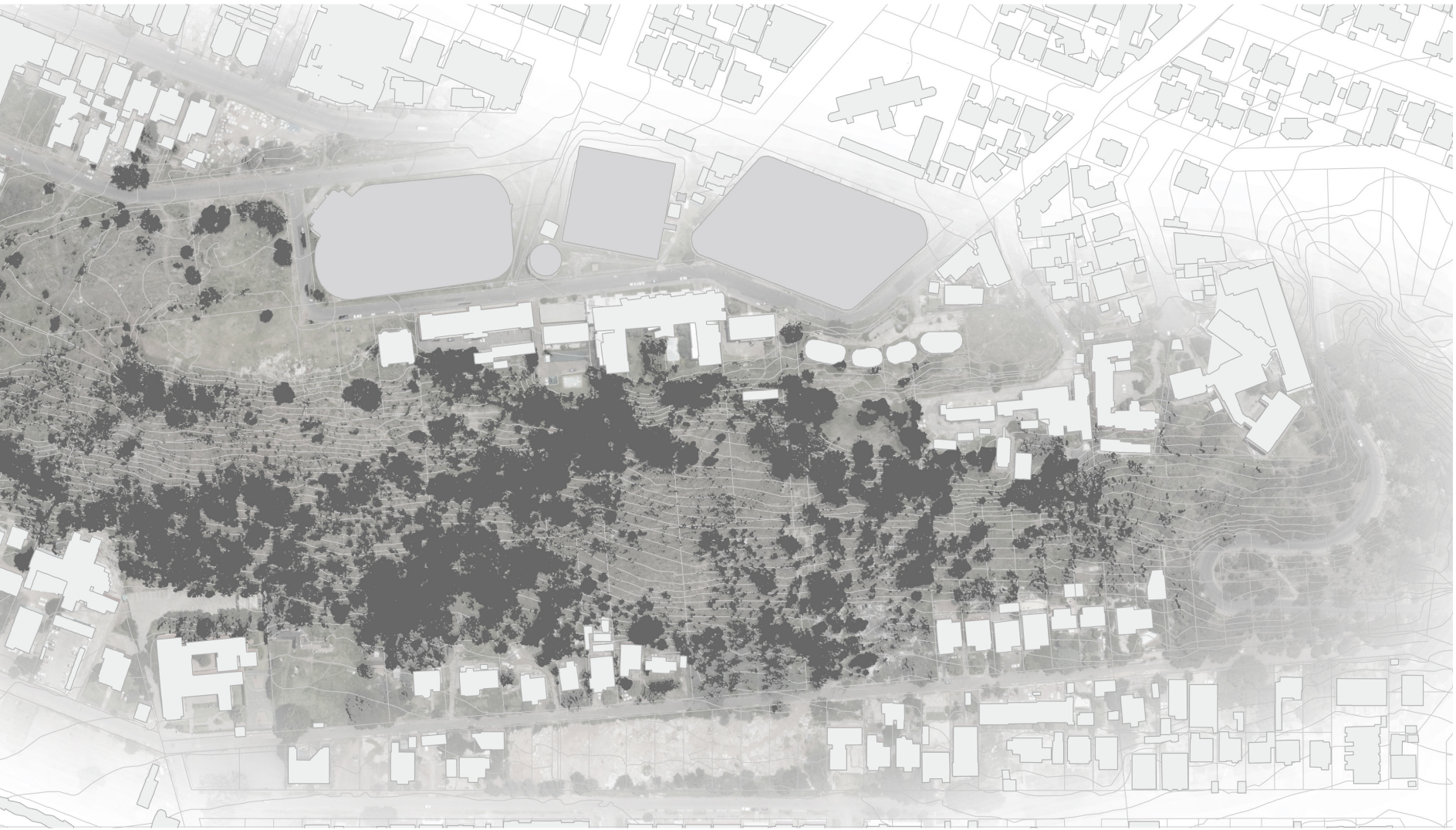


Vegetation Analysis

The vegetation on the Yeoville Ridge itself forms part of the greater Witwatersrand ridge, which has in certain places been urbanised and disturbed by man. The proposed thesis framework aims to address this specific section of the Witwatersrand, which has throughout the years become landlocked through intense urbanisation (refer to Urban Vision). The vegetation on the ridge mainly consists of Highfeld grasslands and invasive Eucalyptus saligna trees. These trees were planted to provide material for building and development, but soon spread throughout the city.

fig 4.31. Mapping of dense tree vegetation on site, mainly invasive Eucalyptus Saligna trees

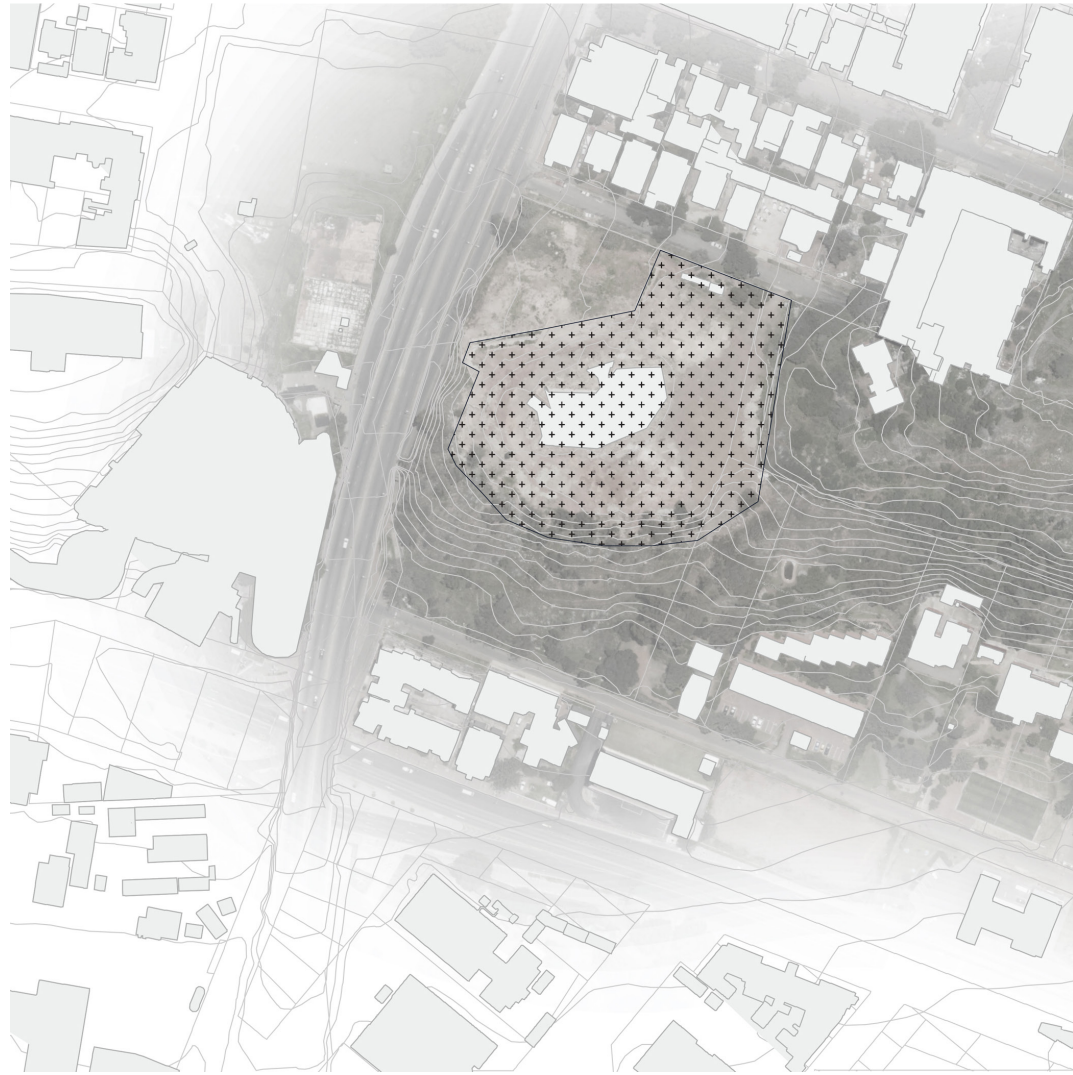


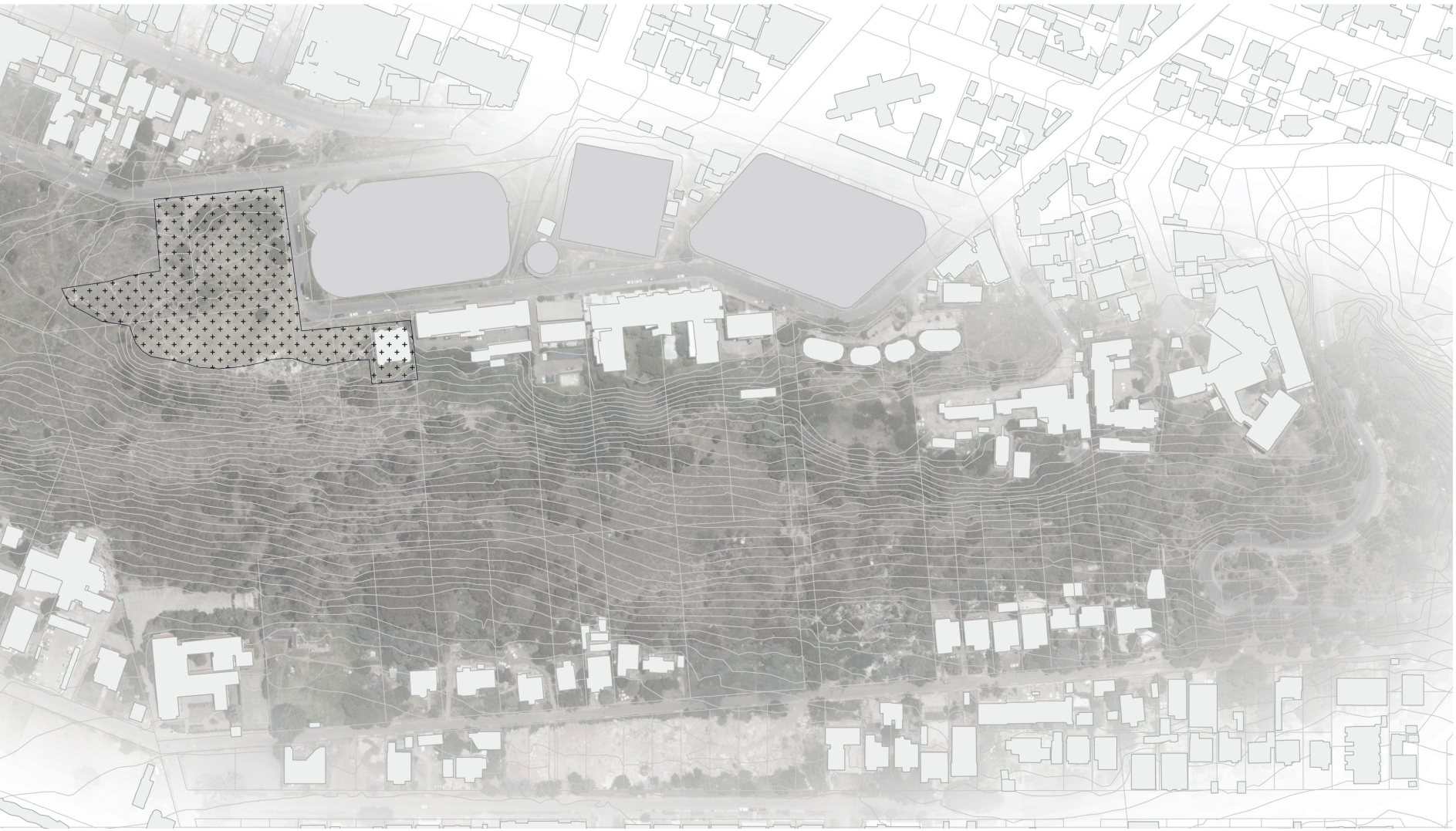


Spiritual Analysis

The Spirituality on site can be defined under two main groups. The first group gathers on the highest point of the ridge in order to escape the chaos of noise of the city. This group consists mainly of Pentecostals who gather on the ridge to pray and sing. The second group refers to an incomplete ruined church structure which would essentially house spirituality if ever completed. Both these groups are considered as highly spiritual.

fig 4.32. Mapping showing zones on site where spiritual rituals could and currently do take place.

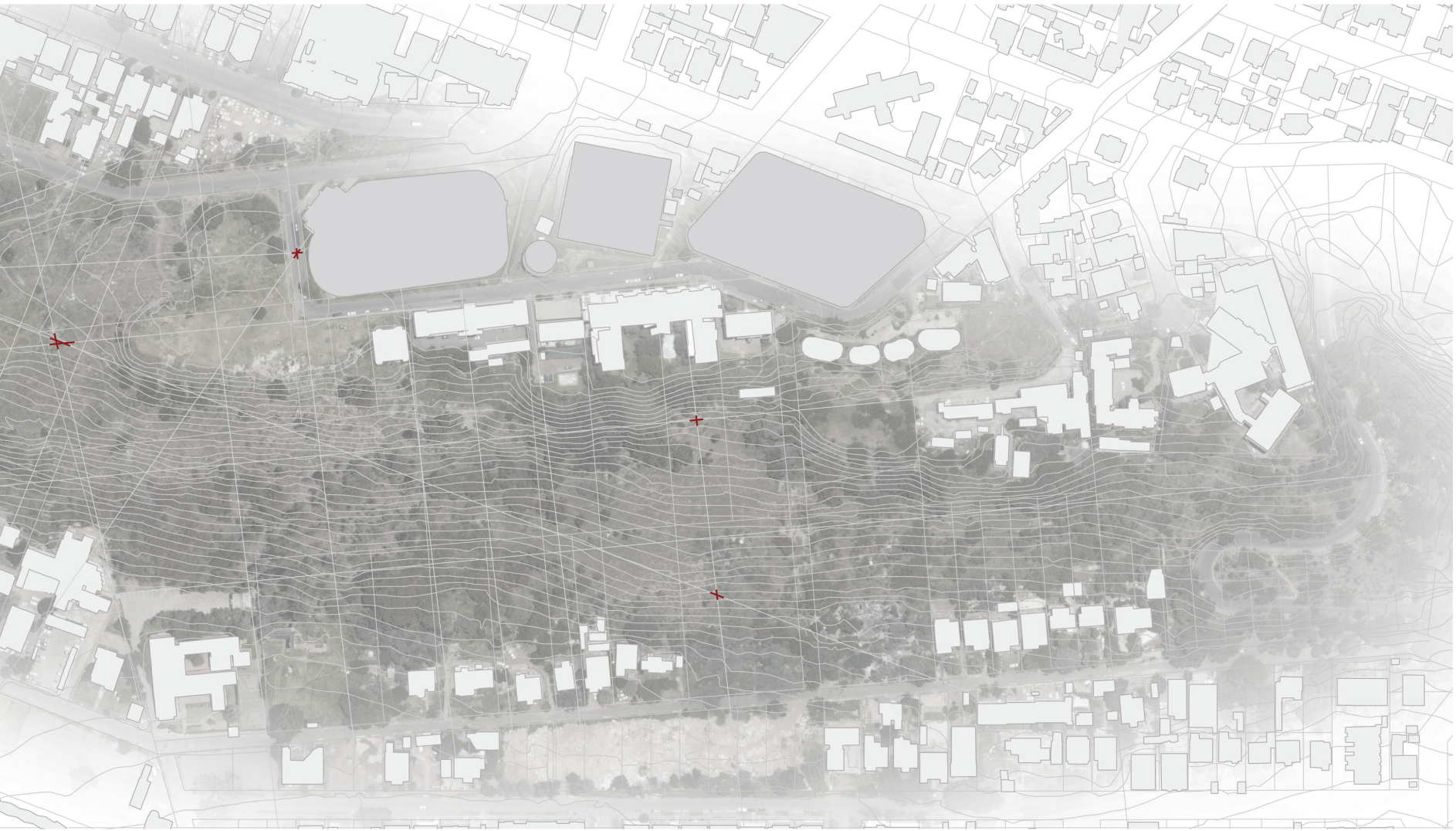




Ordering

The attempt to discover a sense of order on the ridge developed from a landscape mapping exercise which defines important built points, along with topographic irregularities connected with a variety of dashed, dotted and solid lines in order to show the importance of new geometries created. Surrounding grid patterns were also extended onto the site in order to relate to the context of planning in the immediate surroundings. The new geometries where then superimposed onto the site in order to start to define an ordering system to respond to. Furthermore, a grid of, 6 - 3 – 1–5 was imposed onto the site to respond to the topography and subtle curvature of the ridge.

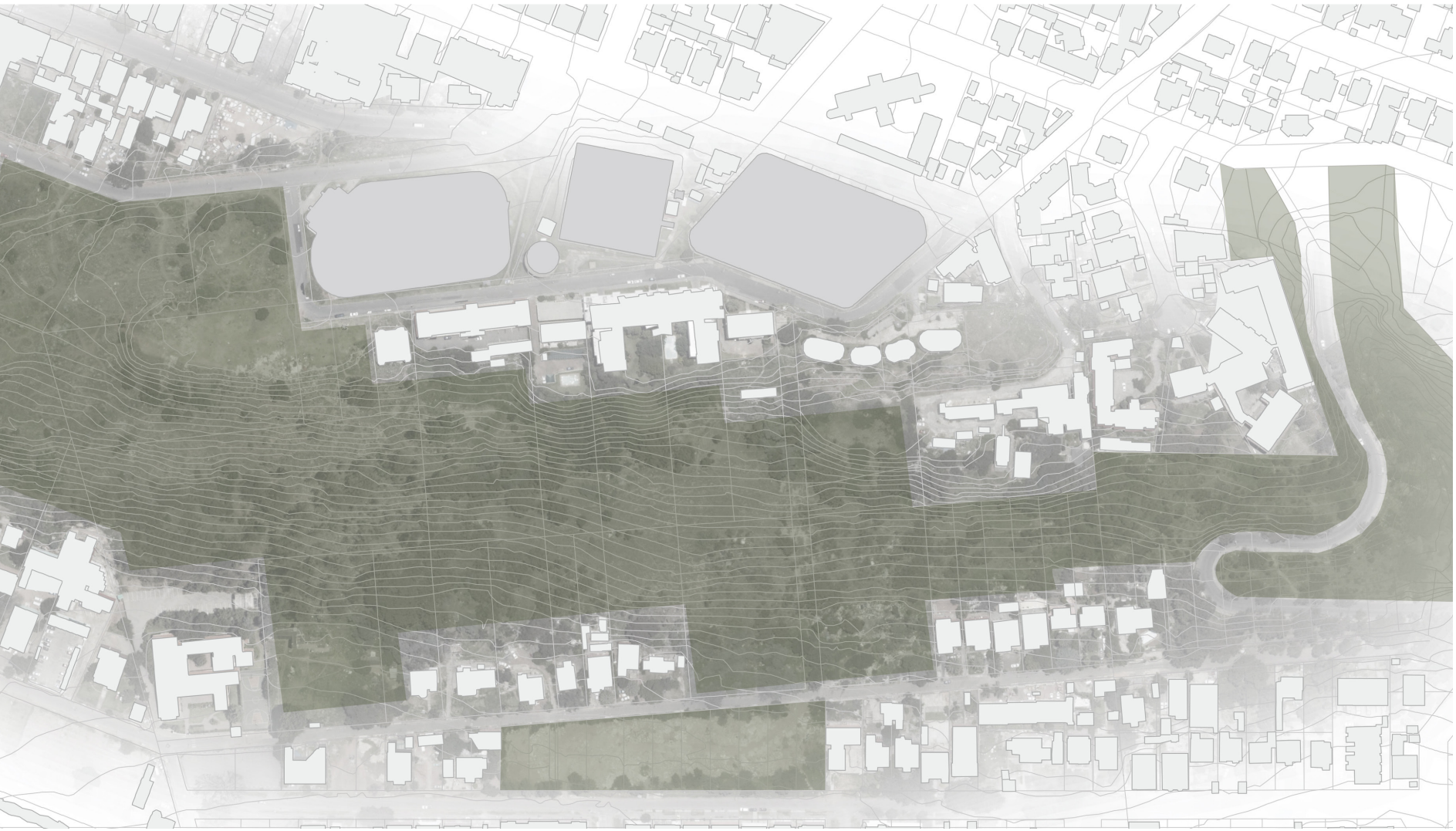
fig 4.33. Mapping showing extrusions of surrounding buildings, natural phenomena and points of interest in order to create order on site



Open and Soft Space

The Yeoville-Highlands section of the Witwatersrand forms one of the largest undeveloped open soft spaces within the city, partly due to its topographic nature preventing high-rise development. Strategically it forms part of a larger network of parks and green spaces which lie along the ridge to the west of Ponte City. As one moves along the ridge towards the east, the soft space increases. Moving away from the density of the city the original untouched grasslands start to flourish, having escaped the grip of the Eucalyptus saligna trees. The site is located on the threshold between Yeoville and Doornfontein, where gold was mined and the Randjeslaagte triangle can be found. Ponte City, a geological agent situated on the ridge, forms part of the dichotomy of man-made and natural conditions along the ridge, transforming the earth's geomorphology, its surface, its geological era.

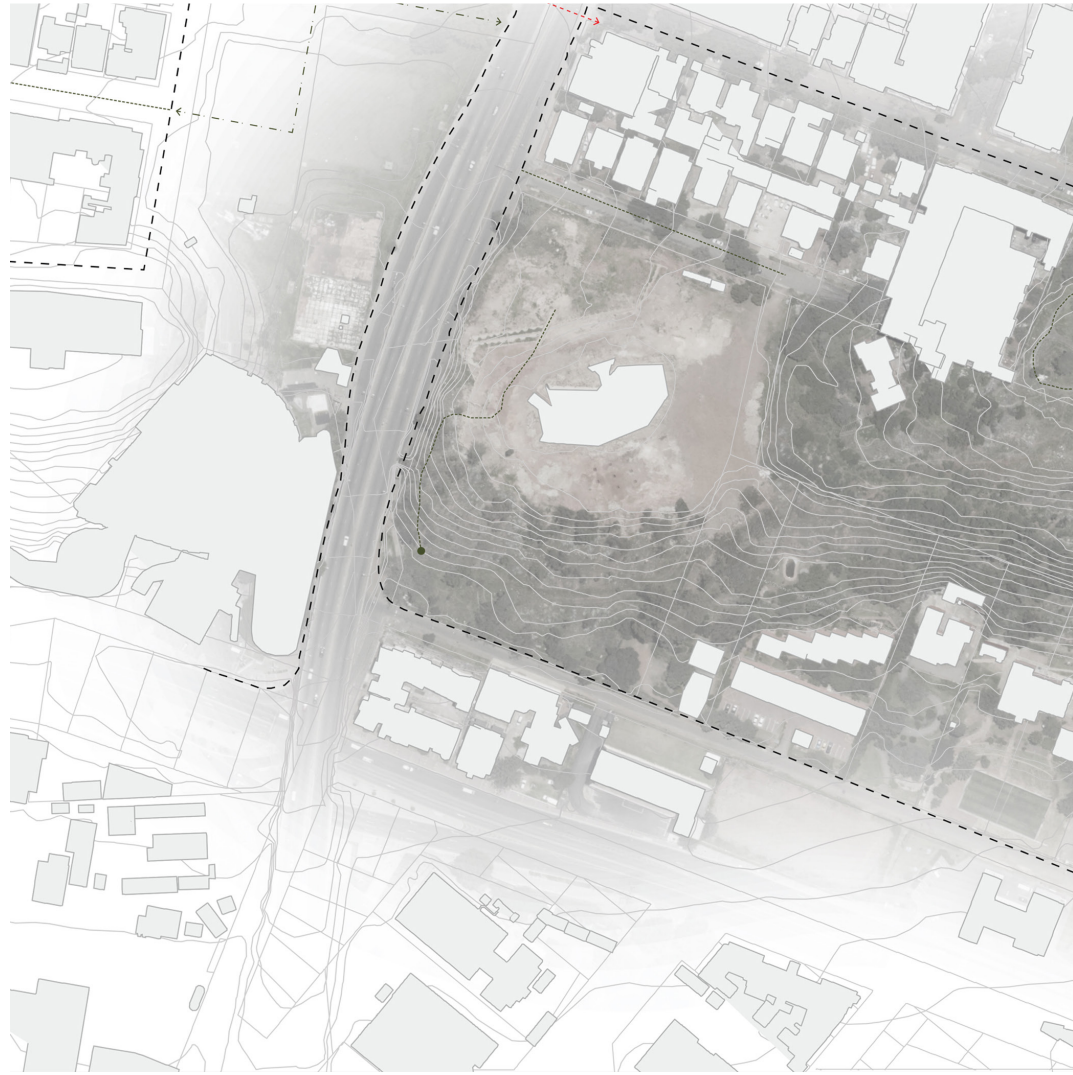
fig 4.34. Mapping of soft and hard green space around site in order to understand impact of making site accessible to public might have



Routes on Site

The routes on the ridge itself are all footpaths that connect various cleared spaces to one another. These paths generally do not cross the entire ridge as shortcuts because of the steepness of the slope. Heavy pedestrian movement takes place on both sides of Joe Slovo Drive, the primary road into the city that divides Yeoville and Hillbrow. Secondary and tertiary roads branching off Joe Slovo Drive tend to be more pedestrianized as a result of high-rise, high-density apartments. Because of the nature of the site and surrounding roads, the site can only be accessed from one strategic points on secondary and tertiary roads. Access between Hillbrow and Yeoville is achieved by crossing Joe Slovo Drive above Berea Park between Hendon Street and Abel Road.

fig 4.35. Analysis mapping of existing routes on site and understanding of movement around site in order to determine points of access to site under investigation



Site Hydrology

Historically the ridge was a natural grassland much like mellville Koppies is today. Due to the topographic nature of the proposed site and the condition of the vegetation on and around the site, the hydrology has become a major design informant. By thoroughly studying the conditions and various types of vegetation on site, it became clear that, where larger groups of Eucalyptus saligna trees grow, run-off water accumulates in the natural furrows along with surface run-off from the rocky areas on the ridge. The glasslands on the ridge are found at a higher level, because the run-off only starts to channel once it flows over the rocky mid-region of the ridge. Thus various natural water accumulation points can be determined due to the density of vegetation and soil conditions on the ridge.

fig 4.36. Mapping of potential water runoff directions and flows as the site is the watershed between north- and east-flowing rivers that end up in the Indian Ocean, and south- and west-flowing rivers which end up in the Atlantic Ocean