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GATED COMMUNITIES AND NEIGHBORHOOD LIVABILITY IN
DOHA

BY

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ABSTRACT

Gated communities are a widespread phenomenon now found in many regions around the world. A gated community is mainly characterized by a focus on physical security measures such as gates, walls, guards, and closed circuit surveillance cameras. For the past 50 years, there has been growing criticism about their negative impact on the livability of neighborhoods. Nevertheless, this phenomenon remains popular in the emerging cities of the Arabian Gulf region that are adopting this residential development strategy in their urban growth patterns. More than 454 residential gated communities were located in Doha, the capital of the state of Qatar, as per the 2014 census (Qatar map, 2014), and their numbers are growing.

Currently, there is a movement taking place in Qatar to restructure its urban planning principles in order to achieve a transformative move towards a more livable urban form. Therefore, the consistent emergence of such gated communities has become a stimulating piece of inquiry, as academics, engineers, and urban planners continue to question the suitability and potential impacts of gated communities as some of the most persistent and popular residential developments in Doha's neighborhoods.

This study investigates residential gated communities in Doha and their relation to a neighborhood's livability, focusing on the Al Waab neighborhood as a case study. Site analysis, observation, morphological analysis, focus group

interviews, and a questionnaire survey were adopted as suitable methodological tools for the investigation of the study area. The analysis is grounded in a perspective that recognizes the phenomenon of gated communities, the notion of livability and its associated principles found in existing literature and contemporary urban planning movements. Additionally, the analysis looks to studies of best practice gated communities' policies and planning responses from South Africa, Canada, and UK.

The results of the study illuminate a livability deficiency in the study area, finding that gated developments negatively impact density and diversity of land use, connectivity, and accessibility within the neighborhood, as well as discourage walkability adaptations, social interaction, and co-presence.

The results also show that people are motivated to move into gated communities for security reasons mainly related to reduced traffic and a safer environment for their children. The conclusions on the livability disparity of the study area and gated communities are used to propose recommendations to better adapt the gated communities into the urban fabric and make sure that they are more livable and better integrated into the existing city.

Certainly, this case study can be applied to similar gated community situations that share the same characteristics of gated enclaves, ultimately contributing to further discussion on the overall livability of gated communities in general and specific cases such as Doha.

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ABBREVIATIONS

GC	Gated Communities
QNDF 2032	Qatar National Development Framework 2032
QNV	Qatar National Vision
GSAS	Global Sustainability Assessment System
MMUP	Ministry of Municipality and Urban Planning
QU	Qatar University
DAUP	Department of Architecture and Urban Planning
MOT	Ministry Of Transport
SG	Smart Growth
NU	New Urbanism
CNU	Congress of New Urbanism
CCTV	Closed-Circuit Television

CHAPTER ONE: INTRODUCTION

1.1. Problem and Rationale

More than 454 residential gated communities are located in Doha as per 2014 census (Qatar map, 2014), and their numbers are growing. Whereas, a movement is taking place in Qatar to restructure its urban planning principles in order to achieve a transformative move towards a more livable urban form.

There is a perception that these gated communities negatively impact the livability of Doha City the capital of the state. Currently, major parts of the city's urban fabric are comprised of gated communities, which relate poorly to its contextual urban fabric, mainly because clear boundaries create the effect of a no man's land in-between. Thus, the city more and more is being split up into gated enclaves and "neglected rest". These gated enclaves divide the urban fabric of Doha's neighborhoods into scattered parcels of land. These parcels are filled with housing blocks that have single and inefficient land use, unlike some traditional compact neighborhoods of the Doha City, itself.

Moreover, current gated developments in Doha are not products of the community, in most cases. They are the products of private developers and real estate companies who mostly focus on profit concerns, ignoring the livability principles and the integration of these gated communities with the surrounding urban fabric. These gated enclaves in the emerging city of Doha are mostly rented by other companies for their employees, expatriate

professionals most of whom are on annual contracts subject to extension. Thus, having limited community involvement due to instable, short-term engagement.

The present attempt of Doha to become a global city necessitates the emergence of livable, integrated communities that are capable of driving the development and that are attached to Doha as a choice of residence. Therefore, the needs of livable neighborhoods that encourage the emergence of such communities must gain more influence on Doha's spatial developments.

In the Al Waab district, residential gated communities are clustered together. With their inward orientation, they meet the streets with blank walls and security gates that prevent entrance except by residents, leaving large private areas closed off from the public access. Hence, truncating the neighborhood and diminishing the accessibility, connectivity, and vitality of its streets at the micro scale. At the same time, they contribute to urban and social fragmentation and consequently lead to the non-livable city of Doha at the macro scale. Together with the absence of an official city-wide regulation addressing this matter, these reasons motivate the author to investigate this case study specifically, and the case of Doha City at a large level.



Figure 1: Map of Doha showing the distribution of gated communities over the city (Qatar map, 2012)

1.2. Aims and Scope of the Research

This study aims to contribute to, through investigation of existing gated communities' urban conditions, the recurrent discussion on the urbanization patterns in Doha City and its future vision of becoming a global city. This study focuses on residential gated communities that are mainly occupied by white collar expatriate and it does not intervene with blue collar labor camps conditions. The research addresses particularly the spatial conditions of the residential gated communities in the Al Waab neighborhood of Doha and its

potential adverse impact on the livability of its contextual area and the overall city. This research will also compare it to other traditional, more organically-grown neighborhoods within the city, which although they were walled or gated during some periods of history, maintained a good integrated, connected urban fabric.

The investigation will be undertaken basically on two levels: first is the discourse of “gatedness”, secondly, the quality of the resulting urban fabric and its cumulative impact on the city’s livability.

The recently published “Qatar National Development Framework 2032” for spatial development of the city refers to the negative impacts of gated communities on the city’s urban fabric and it is addressed as one of the key issues in the housing sector; “mega project developments have tended to concentrate on higher income groups and have produced gated communities and compounds, which fragment the urban fabric and destroy the livability of the city” (QNDF, 2014). As well, gated communities are addressed as a crucial issue in the pattern of urbanization in Doha City; “rapid urbanization has been accompanied by a deteriorating public realm quality, with the creation of large housing compounds interspersed with numerous vacant plots and characterized by a lack of parks and green spaces” (QNDF, 2014). Correspondingly, a number of objectives and policies have been developed to address these issues and support the spatial development of Qatar to 2032. One of the policies calls for livable neighborhoods (Figure 2) with high-quality

mixed use, mixed densities, open and integrated residential areas structured around a hierarchy of centers; “in Doha, there will be significant urban development of some residential areas to create vibrant and accessible neighborhoods. Neighborhoods will be characterized by diversity and mix of uses, public open space, a high quality public realm and walkable streets” (QNDF, 2014).

Policy BE6: Livable Neighborhoods
Promote integration of housing, workplaces, shopping, recreation and community facilities, linked by walking, cycling, and public transport networks to a mix and level of activity that attracts people, creates a safe environment, stimulates interaction and provides a lively community focus

<ul style="list-style-type: none">• Livable Neighborhood				<ul style="list-style-type: none">• Medium Density mixed-use• Multi-story apartments• Retail at ground level• Pool room intrinsic to family values
--	---	---	--	---

Figure 2: QNDF policy for livable neighborhood to manage urban growth (QNDF, 2014)

However, the development framework does not cover the current situation of gated areas and how they can meet these livability factors and become more connected to the city. Thus, this research aims to work on this point of gated communities' transformation to meet the required principles of neighborhood livability set in the future vision of QNDF.

The rationale is to see if this research can recommend ways to better adapt these communities into the urban fabric and to give recommendations to ensure they are more livable and better integrated into the city. Certainly this case study can be applied to similar cases that share the same characteristics of gated enclaves which will subsequently contribute to the overall livability of Doha. Furthermore, despite the growing popularity of gated phenomena in the Arabian Gulf region, surprisingly, the Gulf experience has not been well-documented or studied, with the exception of a few studies in Saudi Arabia. The proposed research attempts to fill this gap in the gated communities' literature.

The Al Waab neighborhood is located approximately 10 kilometers from the Corniche, in the southwest of metropolitan Doha. The neighborhood witnessed remarkable growth beginning in the mid-2000s, resulting in the construction of several residential compounds, villas, and a few medical and commercial developments. Thus, the neighborhood predominately includes modern family compounds with a variety of amenities included, mainly accommodating the expatriate population, in addition to free-standing villas and a number of other facilities.

The area is surrounded by main arterial roads and is in close proximity to a number of the city's premium schools such as the American School of Doha, the sporting facilities of Aspire Zone, Villagio Mall and the under-construction mix development project of Al Waab City.

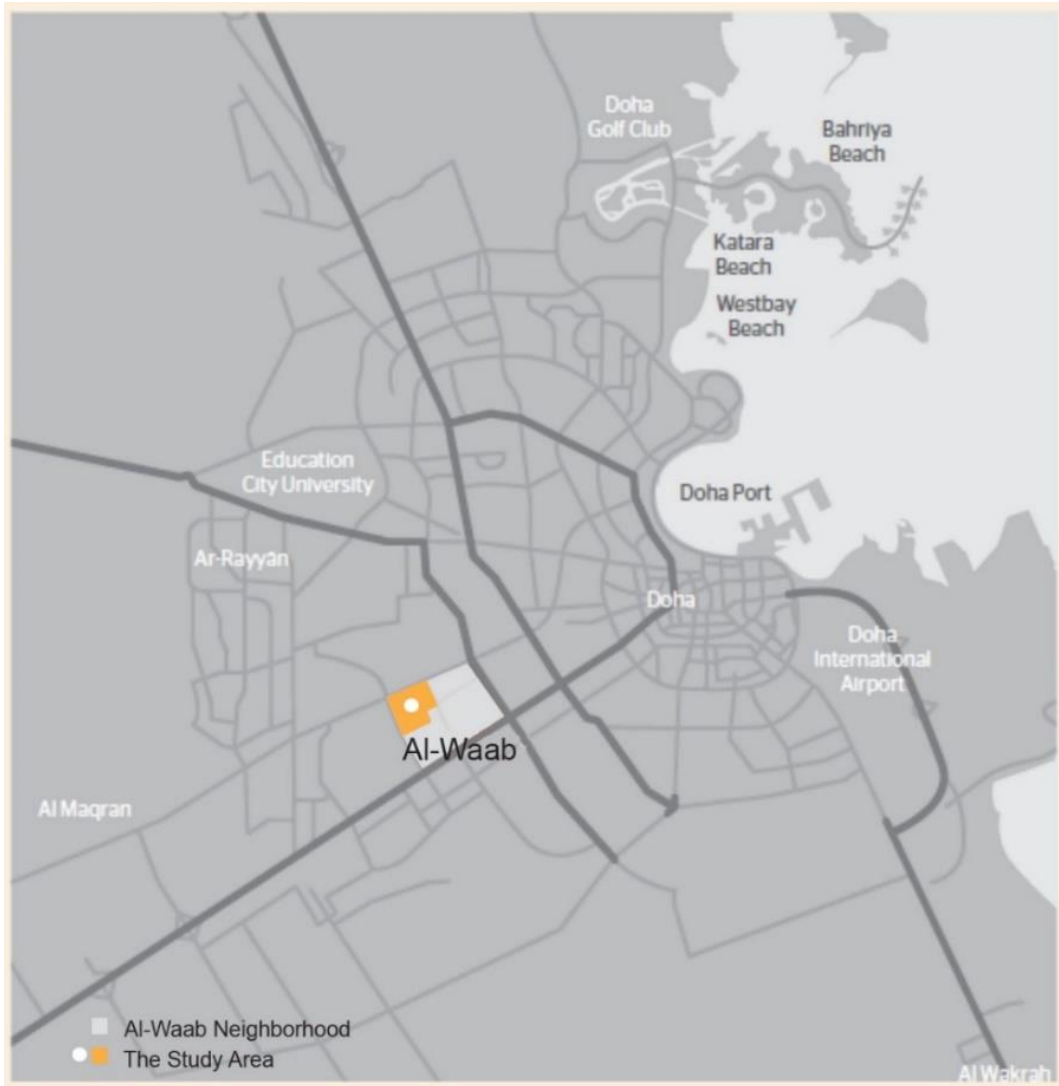


Figure 3: The location of the study area in the city of Doha



Figure 4: Satellite image for the study area. (Source: MMUP)

The neighborhood with its predominating residential gated development, is an example of the recently-built neighborhoods that have re-morphed the periphery of Doha city into isolated islands, embedding a disconnected public realm and privatization strategies. The study area highlighted number of urban incapacities such as; high rent prices, the large deficiency of gated communities in the Al Waab to provide well-structured accessible spaces, and lack of complementary urban qualities, such as pedestrian-oriented street network and street-level retail and commercial activities. The existence of these urban incapacities reveals the lack of research into the 'livability' parameter of

gated development that places the foundations for spatial and social integration necessary for their emergence.

Thus, the objective of this research is to investigate the impact of gated community clusters on the livability of this neighborhood specifically and its cumulative impact on the overall city of Doha. It will also take into account the gated communities spatial conditions that have insistently shaped Doha's difficulty in structuring livable neighborhoods. Here held as the overlay of potentials for density and diversity of land use, connectivity and accessibility, walkability, and the provision for opportunities for social interaction and co-presence. These aspects are regarded and adapted in this research as essentials for the neighborhood livability to overcome the physical and social fragmentation.

The analysis of gated communities' spatial and functional conditions will be set against an analysis of best practices of gated communities policies and planning responses from South Africa, Canada, and UK to assess their planning logic of overcoming the negative impacts and achieving urban livability. In outlining the solutions of these successful planning responses, the research will adopt several points that regard the formation of livable neighborhood in the study area, which can be applied to similar situations in Doha City. Finally, this research will draw recommendations and conclusions for optimizing the livability parameters needed in gated neighborhoods and as

a result, confirming Doha as a livable city, as envisioned by Qatar National Vision (QNV) 2030.

1.3. Research Questions

The conditions of gated communities in Doha raise many questions about the viability of this housing option and its impacts on the livability of the city, which arguably impact connectivity, accessibility, diversity and density to such an extent as to quantify and shape the interactions, co-presence and social activities that highlight the sustenance of livable communities.

The following research questions intend to examine these spatial and social variants and discover their impact on the performance of Doha's gated neighborhoods as a hindrance to livability in comparison to other organic neighborhoods in the city.

- How do gated communities affect neighborhood livability?
 - What is the impact of gated communities on the density and diversity of land uses within the neighborhood?
 - Does the presence of gated communities affect the connectivity of street network and the accessibility to public spaces?
 - Do gated communities encourage walkability?
 - Do gated communities promote social interaction and co-presence of diverse groups?

- How the gated communities' neighborhood of the Al Waab compare in a morphological analysis with other traditional more organic neighborhood within the city of Doha?
- What is residents' motivation behind choosing to live in a gated community?

1.4. Research Hypotheses

To solve the research problem, the following hypotheses have been set and will be tested in the case study analysis.

- Gated communities planning provides density and diversity of land usage inside the neighborhood.
- Gated communities ensure the connectivity of streets and public spaces networks.
- Gated communities maximize accessibility within the neighborhood.
- Walkability is likely to be increased within gated communities and their surrounding contextual fabric.
- Gated communities have the capacity to increase social interaction and co-presence of diverse groups of people.
- The urban morphology of gated communities' neighborhoods is similar to other traditional more organic neighborhoods within the city of Doha.
- People in Doha are motivated to live in gated developments due to security concerns.

1.5. Structure of the Research Project

This research will continue henceforth with a Background chapter (2.0), which will describe the historical evolution of gated communities in the Gulf region and Doha in particular, spanning from the early recorded gated urban settlements in the 1940's until the present. The background will also underline the reasons behind its recent fast spreading.

After that, a Literature Review and Definitions chapter (3.0) will present a review of the relevant definitions and studies on the nature of gated communities and their different types, on the notion of livability and its principles, and the role of livable neighborhoods in sustaining city livability. This chapter will also offer examples of gated communities' policies as a tool for solving the research problem.

Chapter (4.0) Research Methodology will illuminate in detail the methods used to collect and analyze pertinent data. Following that, chapter (5.0) Analysis and Results will record the processing and results of the former data. The last chapter (6.0) Conclusions and Recommendations will present conclusions from the prior analysis and will give answers to the study questions and hypothesis posed initially. Moreover, it will offer recommendations for ways to better adapt these gated developments into the urban fabric and how to improve its impact on livability of the city through design and policy interventions.

1.6. Limitations of the Study

- The nature of privacy and security of the gated communities and the difficulty to enter them for observation and data collection,
- Limited published work that addresses the problem of gated communities in the Gulf region and how to approach the solution,
- Inaccessibility of up-to-date geographic information system (GIS) and demographic data. Moreover, the land use data available mostly refer to condition of 2008.

CHAPTER TWO: BACKGROUND

In order to contextualize the gated communities' phenomenon in the region, and for a better understanding of the basis of its existence in Qatar, a historical overview of their emergence is introduced in this chapter, along with the contemporary reasons that led to gated communities extensive spread in the state. The review traces the first gated settlements documented in aerial photos and literature and the relation between the *ferreej* (which is the traditional Qatari neighborhood or community) and modern gated developments, with an objective to shed light on the urban past complexities, which are missing in modern planning schemes.

2.1. The Emergence of Gated Communities in the Gulf Region

The transformation of the Gulf states from small traditional tribal or coastal settlements to wealthy oil-exporting nation states irrevocably changed the structure and fabric of societies, economies, and the overall built environments within a few short decades (Salama & Wiedmann, 2013). In the late 1930s, the oil discovery and exploitation by western oil companies, led to a massive influx of western professional workers to the Arab Peninsula region, thus creating a heavy demand for housing.

American and British oil companies introduced a new type of housing when they built the first settlements for their employees. Companies like the Kuwait Oil Company (KOC), the Bahrain Petroleum Company (BAPCO), and in Saudi

Arabia the Arab American Oil Company (ARAMCO) reacted to the increasing demand for housing by constructing residential compounds for their employees, starting around the 1940s.

The ARAMCO oil settlement in the eastern province of Saudi Arabia, established in 1938, marks the first gated development in its modern design. The general typology used was the detached one or two-story villa on a square plot within an orthogonal grid of streets, organized so as to provide each house with access to the grid by car (Glasze & Alkhayyal, 2002; Glasze, 2006; Salama & Wiedmann, 2013).

Later, these developments were promoted by government's policy, where the foreign companies with more than 50 employees were obliged to provide housing for their workforces, in order to control and limit their cultural influence on the local society. On a broad level, there are three types of compounds for expatriates, where the skill level and the marital status played the biggest roles in defining the compound type. These ranged from basic accommodations in constructed prefabricated units for unskilled or semi-skilled workers to single semi-professional compounds with minimal amenities. At the higher scale, there were well-maintained, landscaped compounds with a range of lifestyle amenities for married expatriate professionals with their families (Glasze, 2006).

Most of the complexes that remained and continue to be popular, and which this research in particular is focusing on, represent the third type: houses for high income expatriate professionals who are, in most cases, provided with accommodation as part of their working contracts. The compounds are gated and monitored by security guards and closed-circuit television (CCTV) systems. Access is strictly limited to residents and their visitors. Maintenance and administration are provided through on-site management. Rental value in these gated communities is high and approximately more than double the value for an equivalent non-gated development.

2.2. Setting the Scene: Residential Development and Gated

Communities in Doha

Doha City is the main urban area where the greater part of Qatar population, both nationals and expatriates, resides and works. From a broad perspective, the residential units' types in Doha can be distinguished as follows: nationals living in privately constructed individual villas located in older established areas of the city or on the periphery; expatriates housed in both low-rise and high-rise apartment buildings and tower blocks in the inner city neighborhoods; villas, both attached and detached, in gated residential compounds throughout the city (Al-Buainain, 1999) or in newly built gated enclaves such as the Pearl.

The public housing strategy in Qatar provided nationals with free replacement of their properties, which were located in the old Qatari neighborhood, with government allocated plots to construct their houses, supporting them with

interest-free loans or financial compensation. Moreover, the public sector workers of expatriates also were supplied with suitable housing units (Nagy, 1997). This was emphasized by Khaled Adham: “the government’s policy was to supply every Qatari with a plot of land and an interest-free loan for building a house. The expatriate workers also usually received free housing as part of their work contract.” (Adham, 2008).

Most of the newly designated plots were in the peripheries of Doha and in newly planned suburbs, far from the old neighborhoods in the city center where people formerly used to reside. This housing strategy had a critical impact on the way the social and urban structure of Doha developed, which involved the demolition of older, more cohesive neighborhoods of nationals and the constructing of new, modern—but more socially and physically detached—ones that mainly took the form of gated communities (Salama & Wiedmann, 2013; Adham, 2008).

Going back to the history of gated communities in Doha, according to Mahgoub, Khalfani, and Lockerbie, the first compounds or gated residential developments found in Qatar were developed by merchants’ families like Darwish and Al Manna in the early-to mid-1940s (Figure 5). Then the idea started to flourish in the inner city, and a number of walled residential developments appeared inside the different fereej (Mahgoub & Khalfani, 2012; Lockerbie, 2005).

For instance, Fereej Al Salata and Fereej Al Hitmi, as shown in aerial photos (Figure 6) were a group of one-story residential compounds on the outskirts of these fereejis with relatively spacious and well-developed structure.

In the late of 1950s, Qatar witnessed the arrival of foreign oil companies and a migration of the work force. The accommodation of the expatriate population was provided mainly with gated communities as a housing type. As well, the oil companies were settled within newly developed gated settlements supplied with all the utilities, as the city was not established enough back then to handle the increasing numbers of the population.

Thus, gated communities were developed in the desert or remote areas to house employees working on energy projects, which were mostly isolated communities created for the sole purpose of the ongoing project. However these communities grew rapidly on some projects. For example, the Ras Laffan Project reached a total of roughly 200,000 residents. Influenced by this experience, the merchants took the opportunity to expand their work and make more profit by supplying the accommodation, which regarding the diversity of the newly comers, took the shape of gated communities.

With the economic growth of the state and increase of businesses that involved the migration of expatriates to Qatar, and especially to Doha as the sole center of development, gated communities spread among the districts of the city. Furthermore, construction companies and real estate markets contributed by

building and enlarging the numbers of these residential developments in order to make a profit (Mahgoub & Khalfani, 2012; Lockerbie, 2005; Shawish, 2015).

This was reinforced by the distinguished Qatari architect, Mohammed Al Buainain, who stated that, as a result of the enormous need to house the growing expatriate population, many national citizens invested in construction and real estate of gated compounds in various parts of the city. "Gated communities are speculatively built by private Qatari companies and wealthy people, [these] are mostly rented by the state to house a sizeable proportion of western expatriates who are working for the public sector. This type of rental housing is by far the most expensive type of housing in the whole country" (Al-Buainain, 1999).

This might have shed light on the historical initial reason behind gated communities presence in Doha as a housing option; however, it is crucial to point out the more current reasoning which fueled their presence and caused them to widely spread all over the city.



Figure 5: Photo for the merchants' compounds on the sea front of Doha back in 1950 (Lockerbie, 2005)



Figure 6: Al- Hitmi compound, in the north-west of Doha, a photo taken in 1960 (Lockerbie, 2005)



Figure 7: Aerial view of speculative residential complexes in Doha where many high-skilled European expatriates live during 1970s. (Al-Buainain, 1999)



Figure 8: Privately rented housing complexes (modern villa type) (Al-Buainain, 1999)

2.3. From Fereej to Gated Community

The notion of gated communities in the Arab world is not new. The traditional settlements used to be surrounded by a ring of walls. A number of secured large gates were erected on different sides of the settlement for defensive and security reasons as they were the only entry/exit points of the settlement.

Many of the traditional Arab cities were based on an enclosed form of social and economic solidarity and were closely-knit and homogeneous communities (Shawish, 2015). Several scholars claimed that this same ancient urban type began to re-emerge in modern settlements in the shape of gated communities. Glaze and Alkhayyal interpreted their analysis in two points of view. First, the modern, small extended-family compounds, which can be found in most of the Gulf cities, represent a reappearance of certain socio-spatial settings in the old city where extended families lived nearby around one cul-de-sac. Their second point was that the new compounds for western foreigners and expatriates can be seen in the principle of spatial seclusion of social groups that have different religious and cultural backgrounds, which was a common principle of socio-spatial organization of the Arab old town (Glasze & Alkhayyal, 2002).

Similarly, Samer Bagaeen stated that “the roots of the modern gated community in the Middle East can be traced back to the formal and control mechanisms prevalent in the traditional settlements” (Bagaeen, 2010). Here those mechanisms such as kinship and social solidarity basically gave rise to the form of the traditional cities historically associated with the Middle East.

This is supported by Salama and Wiedmann, who indicated “the traditional neighborhoods locally known as fereej can be regarded as urban cells; they were developed by a system of branching side streets, which ended in a cellular arrangement of houses of related clans and kinsfolk. In some cases, certain more exclusive, neighborhoods were even protected by secondary gates from the rest of the settlement, to some extent curiously anticipating the preference for the gated communities of today. Thus, traditional oasis towns were strongly segregated according to tribal and clan or kinship differences and affiliation” (Salama & Wiedmann, 2013).

These arguments properly situate the gated phenomenon within a broader historical context of the Middle East urban evolution. However, one can argue that the discourse of “gatedness”, the construction of barriers, and segregation are as old as urbanism, itself. But the problem lies in the contemporary product condition of this gated phenomenon. The old town had cellular organic urban patterns consisting of the courtyard house as a core cell multiplied in clusters to form the neighborhoods, which were connected with winding streets to the central backbone of the town, the mosque, and the market. Even though some of these neighborhoods were walled and gated, that did not affect the quality of the connections or the complexity of pattern articulation.

Nowadays, gated developments have broken away from the traditional neighborhood pattern of organic courtyard houses and been replaced with modern walled houses, which stand on identical rectangular or square plots

accessed by an orthogonal grid of roads, planned so as to provide car access from the road grid to each house (Salama & Wiedmann, 2013).

This is supported by Al Buainain, who described the case of Doha urban transformation as follows: “With the income derived from oil exports in the emerging oil sector in the 1950s, entire neighborhoods were bulldozed and redeveloped in order to make traditionally narrow lanes into roads wide enough to accommodate ever-increasing automobile traffic” (Al-Buainain, 1999).

The new gated design clearly shows differences in the hierarchy, mix of functions, quality of connections and spaces. There is a complex articulation of that ancient settlement which does not exist in the contemporary one.



Figure 9: Ariel photos of a traditional fereej in Doha on the left, and a contemporary gated community on the right.

2.4. Problem Identification Factors

The contemporary examples of gated communities are shaped by global socio-economic changes, marketing strategies of developers, spatial transformation that happened in many cities around the world in the last few decades, and the spreading of architectural concepts and lifestyles by international migration. (Levent & Gulumser, 2007; Webster, 2002; Blakely & Snyder, 1997). Gated communities are a global phenomenon and they are developing now in many countries all around the world, although they differ between countries with reference to their characteristics, and principally with respect to the different causes of their development, such as: security, ethnicity, and prestige (Levent & Gulumser, 2007).

However, gated communities' existence has been mostly associated with the fear of crime, and security and safety concerns, for instance in the US and South Africa, where gated communities are most popular (Low, 2001; Quintal, 2006). While Qatar is considered one of the safest countries in the world, ranked on factors such as crime rates and national police presence (Khatri, 2015), gated developments continue to be dominant in Doha City. Thus, most likely the safety issue is not the reason behind their popularity.

Then, why gated communities in Doha? What are the factors that encourage its spreading? The economic transformation of the state coupled with the oil wealth and the resulted construction boom are the root causes that have reshaped urban physical and social morphologies in Doha City from its

traditional status. Gated developments were largely fueled by a number of factors which are described in the following section.

2.4.1. Extensive Expatriate Influx and Migration

Qatar has become an attractive destination for people from a range of different cultures and backgrounds to work and live. These people are mainly attracted by the abundance of job opportunities, relatively high salaries, and tax-free living. The massive influx of expatriates has caused the urban population of Qatar to witness an exponential growth that has resulted in shaping economically and ethnically diverse and fragmented demographics of different cultures, with a diverse variety of needs and requirements. According to Salama and Wiedmann, “the population is composed of large groups of expatriate Arabs and Asians, in addition to smaller groups of Europeans and North Americans; these expatriate groups represent a major workforce community of skilled professionals and semi-skilled or unskilled laborers from over sixty countries” (Salama & Wiedmann, 2013).

This diversity and uncertainty of who will live in the same neighborhood next to another makes people prefer to isolate their culture in order to give the possibility for themselves to preserve various levels of freedom within these gated developments. This same situation can be found in Saudi Arabia, where gated communities provide their expat inhabitants with the same lifestyle that exists in their homelands. So they can freely practice their daily activities, which are prohibited outside the gates because they contradict local traditions or are

simply against the laws of the land (Touman, 2002). However, this has resulted in social destruction and deserted urban areas as these gated shells were often built by developers without integrating them with their surroundings, and without taking into consideration the different lifestyles and needs of the various social groups.

2.4.2. Transient Working Contracts

The aforementioned massive expatriate influx, generally built on the basis of interim working contracts, gave rise to segregated temporal societies that frequently change and move. These unsettled populations scarcely ever develop attachments to their neighboring environments (Salama & Wiedmann, 2013). Equally, they do not perceive the cities as homes, do not really establish long-term relationships with these locales, and subsequently are not creating a long-term economy to sustain a viable urbanized community.

Through their transient working contracts, typically most employees receive company arranged housing where they are provided with certain privileges as part of their contracts. Gated communities are a suitable, manageable solution to have these services as part of the package, and the advantages of which are offered through the contract exclusively to certain groups of people (Shawish, 2015).

2.4.3. Urban Planning Approach

Doha as an emerging city competing to join the club of global cities, faced the pressure to accelerate and facilitate its real estate development and construction growth of spectacle projects within a very short time. Thus, due to this high demand of expanding the city and its infrastructure and the variety of service sectors that public investments must deal with, government in many cases was forced to decentralize and privatize urban development by selling state-owned land to investors and developers. This sell-off and decentralization of planning caused the rising of influence of private developers, who originated master-plan developments that took the form of exclusionary and exclusive man-made islands, eye-catching new peripheral districts and mixed-use enclaves or cities within the major city (Salama & Wiedmann, 2013; Adham, 2008).

These developers, whose interest was solely based on profit concerns and market logic, found in the gated developments a trump card. They planned for the accommodation aspect and housing demand without considering the livability principles and the residents' needs, for example, of having some of the essential services such as commercial and recreational facilities within walking distance from their residences. The developers' approach, along with the lack of integrative development and regulation within the urban areas and the "laissez-faire mechanisms", has resulted in divided urban fabric, long driving distances, and traffic jamming. This situation has become even worse because

of the insufficient public transport system and the absence of integrated, well-distributed public amenities on the level of the single neighborhood structure and the overall major city.

2.5. Current Initiatives

An introduction of Doha City as an emerging global hub has taken place in the QNV 2030 and the accompanied development framework of 2032 which is expected to be the main leading agenda to guide Doha's spatial development. It calls for the establishment of a hierarchy of centers, encourages mix and integration of uses, and promotes livable neighborhoods. This confirms to Salama and Wiedmann, who stated “. . . the evolution of urbanism in Doha is now at a turning point that will lead to a new spatial transformation that will, in turn, shape a built environment that adequately reflects its inhabitants' needs rather than being an imposed urban shell containing them” (Salama & Wiedmann, 2013).

To meet future demand, the provision of community facilities; government and commercial services and supporting amenities will be located within urban centers (Figure 10) which are strongly related to the existing centers of economic activity. These urban centers will be highly accessible via existing and proposed transportation networks.

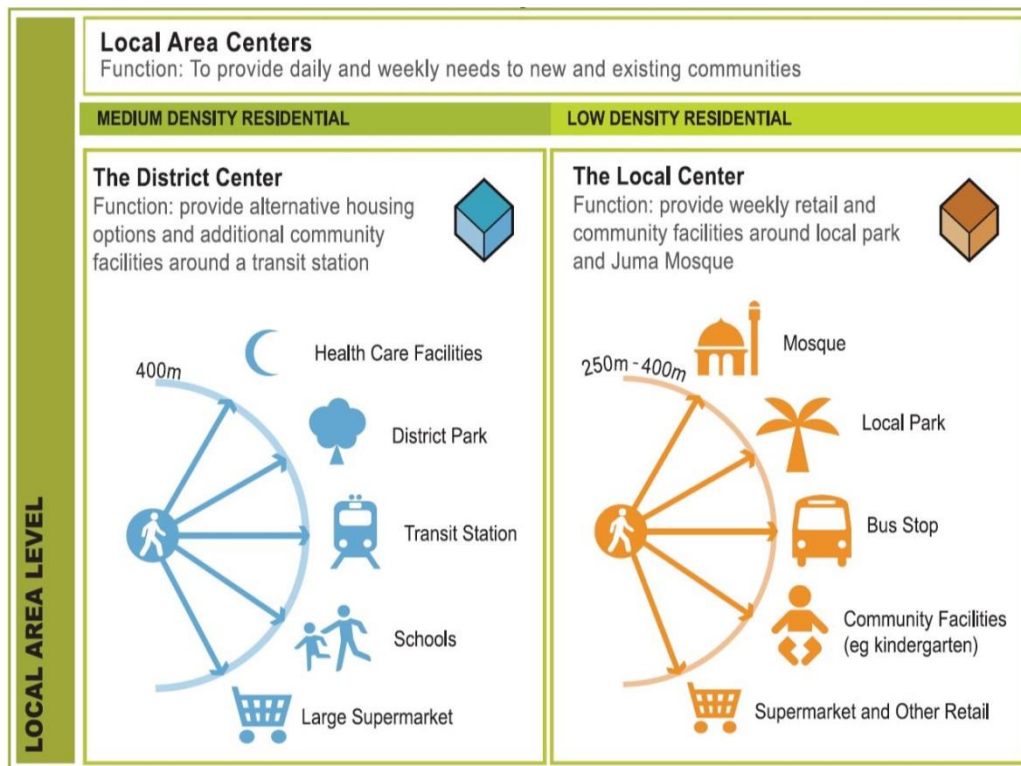
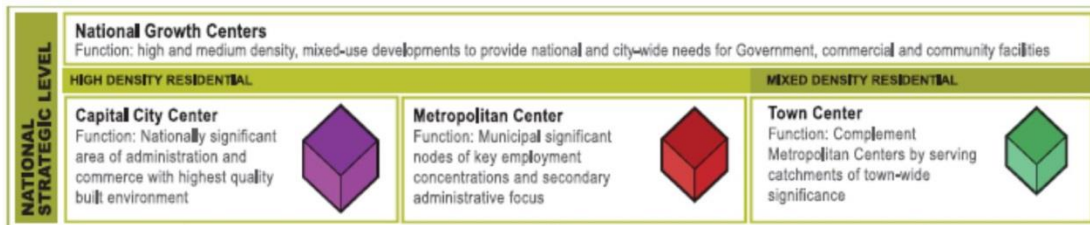


Figure 10: Hierarchy of centers (QNDF, 2014)

However, along with the introduction of this vision, a number of innovative development strategies were launched, their approach largely emphasizing novel ideas to achieve livability, quality of life and sustainability of the built environment. In an effort to enhance the city urban planning schemes and to

ensure their sustainability, new programs and assessment tools were introduced such as the Global Sustainability Assessment System (GSAS).

One of the GSAS schemes concerns districts and neighborhoods, working on weighting methodology of preset categories in an attempt to resolve measurable and technical matters of a particular neighborhood (GSAS, 2014). Unfortunately, these new assessment programs currently lack specific qualitative measures required to enhance the livability of residential neighborhoods. As they focus on developing calculations and technical standards in preference of providing genuine spatial and social solutions for the residents.

Nevertheless, currently in Qatar there are undergoing experiments for new ways of living like the mega projects of Mushiereb down town Doha and Lusial city (Figure 12) where they are trying to build more livable residential communities which are not gated. Both projects have a promising vision to achieve livability within their developments although, their integration with the surrounding urban fabric is still unclear.

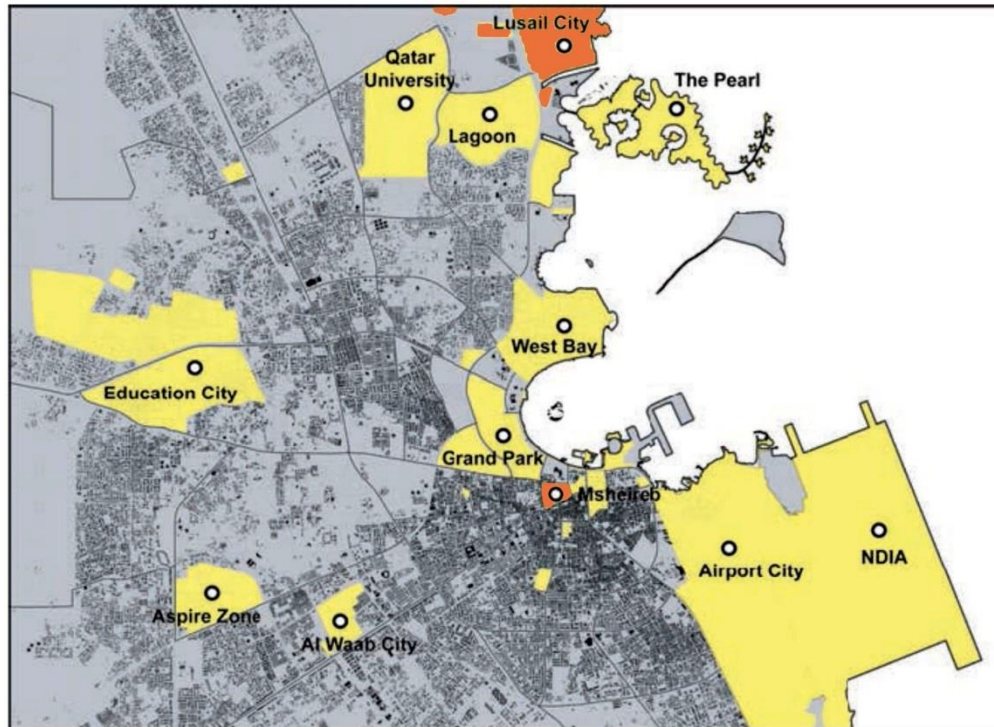


Figure 11: Map of mega projects including Lusail and Musheireb (Salama & Wiedmann, 2013)



Figure 12: On the left Mshereb downtown Doha in the heart of Doha City. On the right Lusail City development 15 km north of Doha City.

2.6. Conclusions

The gated communities in Doha and the region have been contextualized in a historical overview of their emergence and the patterns of urbanization that accompanied their growth. The first example of gated communities was the merchant compounds by the sea, followed by the arrival of the oil companies that took the form of gated development as a residence for their employees. During this time, the gated developments spread all over the city in order to accommodate the increasing numbers of expats who were attracted by the availability of job opportunities that resulted from the Doha construction boom.

Later, a more in-depth historical review showed that the concept of gated communities existed in the traditional Arab cities but the contemporary form lacked the complexity of the old city pattern. Finally, the factors that caused the spread of the new gated communities have been identified in this chapter. In addition, there was a brief review of the current planning initiatives taking place in Qatar to address the livability and sustainability issues.

CHAPTER THREE: LITERATURE REVIEW AND DEFINITIONS

The following review will propose several related definitions that will be used in this study as parameters to examine the studied urban area of gated communities. It will also offer theoretical backgrounds on the origin of the gated communities and the different classifications and types found in the literature.

The chapter will define the notion of city and neighborhood livability and related principles, as well as identify specific suitable livability principles that can be adapted as tools to give rise to a socially vital, livable neighborhood. Additionally, the review looks to studies of best practice gated communities policies and planning responses from South Africa, Canada, and UK.

3.1. Gated Communities

3.1.1. Gated Communities Definition

There is no comprehensive definition of gated communities since it is a diverse phenomenon. However, common aspects center around having closed, isolated, privatized areas of the city that serve as residential plots with above-average amenities. The term “gated community” will be referred to in this research as gated development, settlement, and residential compounds.

In gated community literature, researchers present different definitions of this phenomenon. However, most definitions share common features. The following definitions introduced in this study are based on their relevance to the

types of gated communities and compounds (in local terms) spread throughout the city of Doha.

Table 1: Definitions of Gated Communities

Definition	Source
<p>“Gated communities can be defined as walled and gated residential developments that restrict public access.” (Atkinson & Flint, 2004)</p>	<p>R. Atkinson & J. Flint in 2004 in the <i>Housing Studies Journal</i></p>
<p>“Gated communities are housing developments on private roads that are closed to general traffic by a gate across the primary access. These developments may be surrounded by fences, walls or other natural barriers that further limit public access.” (Grant, 2013)</p>	<p>J. Grant in 2003 in a book titled <i>Gated Communities: International Perspectives</i></p>
<p>“Gated communities are residential areas with restricted access such that normally public spaces have been privatized.” (Blakely & Snyder, 1997)</p>	<p>Blakey & Snyder in 1997 in their book titled <i>Fortress America: Gated Communities in the United States</i></p>
<p>“Physical privatized areas with restricted entrance where outsiders and insiders exist”. (Blakely & Snyder, 1997)</p>	
<p>“The Gated Community is an urban settlement surrounded by walls with several entrances. These entrances are controlled by gates and they are guarded by security agents. Sometimes these gates are under video surveillance. The access to these settlements is strictly reserved, generally, to the residents and their visitors.” (Touman, 2002)</p>	<p>Touman in 2002 in a journal paper titled “Gated Communities: Physical Construction or Social Destruction Tool?”</p>
<p>“In physical terms, a gated community is a fenced or walled residential area, to which access by non-residents is either restricted or controlled by CCTV and/or security staff. A gated community is served by private internal roads, and may include facilities such as a gym for the use of residents only. In legal terms: residents of a gated community are tied into a common code of conduct, and there is generally a degree of self-management of the development by the residents.” (Atkinson, Blandy, Flint, & Lister, 2003)</p>	<p>Atkinson et al, 2003 in <i>England Newhorizon project definition of gated communities</i></p>

3.1.2. Gated Communities Types

The classification of gated communities provides an important foundation for the subject's theoretical development and provides a better understanding of gated community subtypes. Recent urbanization has witnessed the rise in popularity of private residential, commercial, industrial, and educational spaces. However, in academic literature the term gated communities has been mostly related to residential gated developments.

This residential gated communities category can be classified into different types according to different scholars who have spent decades studying gated communities. Scholars have established their own typologies, most commonly on the basis of reason for development, consequences from development, and major implications of gated communities including issues like income, ethnicity, and exclusion (Levent & Gulumser, 2007; Blakely & Snyder, 1997; Grant & Mittelsteadt, 2004). In the reviewed literature, there are four main approaches used to classify gated communities. A summary of each of the four approaches is outlined in this section.

3.1.2.1. Blakely and Snyder Typology

It is useful to first highlight the three main types of gated communities found in Blakely's division of gated communities, noting that many of their studies are rooted in North American urban experiences. During their research, they identified a key commonality in gated communities even across diverse housing markets: the presence of security guards.

Each type of gated community has an access control system, but varies significantly in how they deal with the development of community consciousness within their walls (Levent & Gulumser, 2007). The first type includes lifestyle communities where gates and walls mark off and defend an area where civil authorities are deemed unable to sufficiently protect the population from dangerous and armed groups.

The second is the prestige community that feeds on exclusionary popular ambitions and the desire to differentiate. The third includes security zones where community safety is the primary goal (Blakely & Snyder, 1997). Nine sub-types are derived from these three main types, as explained in Figure 13.

Type	Features	Subtypes	Characteristics
Lifestyle	These projects emphasize common amenities and cater to a leisure class with shared interests; may reflect small-town nostalgia; may be urban villages, luxury villages, or resort villages.	Retirement	age-related complexes with suite of amenities and activities
		Golf and leisure	shared access to amenities for an active lifestyle
		Suburban new town	master-planned project with suite of amenities and facilities; often in the Sunbelt
Prestige	These projects reflect desire for image, privacy, and control; they focus on exclusivity over community; few shared facilities and amenities.	Enclaves of rich and famous	secured and guarded privacy to restrict access for celebrities and very wealthy; attractive locations
		Top-fifth developments	secured access for the nouveau riche; often have guards.
		Executive middle class	restricted access; usually without guards
Security zone	These projects reflect fear; involve retrofitting fences and gates on public streets; controlling access	City perch	restricted public access in inner city area to limit crime or traffic
		Suburban perch	restricted public access in inner city area to limit crime or traffic
		Barricade perch	closed access to some streets to limit through traffic

Figure 13: Blakely and Snyder's general typology of gated communities (Blakely & Snyder, 1997; Grant & Mittelsteadt, 2004)

3.1.2.2. Grant and Mittelsteadt Typology

The typology of Grant and Mittelsteadt (2004) is grounded from the perspective of Blakely and Snyder with additional reflections on the level of enclosure and the characteristics of facilities and amenities, the type of residential housing patterns and security features, and the level of affluence.

While the typology of Blakely and Snyder was based principally on function, in their typology, Grant and Mittelsteadt suggest that eight factors should be taken into consideration when trying to categorize the physical form of gated communities: the security features and barriers employed, the functions of enclosure, the facilities and amenities included, tenure type, the types of inhabitants accommodated, size, location, and the policy context (Grant & Mittelsteadt, 2004).

Via these eight characteristics, Grant and Mittelsteadt propose a nuanced classification typology that focuses on the type of enclosure and use of the term “gated”. They classify gated communities in eight types as shown in Figure 14.

The classification shows the degree of enclosure recognized in gated developments. The gated communities in this study area fall into the last type with restricted entry, guarded areas surrounded by walls that have gates with controlled access, and security guards. In fact, most of the gated enclaves in Doha fall into the last two types, whether they are in inner city areas or in the suburban areas.

Type	Boundary	Road access	Notes
Ornamental gating	no marked boundary	landmark gates at entry	Feature gates showing the subdivision name are placed at the major entries to give identity to an area.
Walled subdivisions	opaque fence or wall	open	Fully walled subdivisions are a common suburban feature in western Canadian cities. Cars and pedestrians may enter.
Faux-gated entries	opaque wall or fence	narrowed entry, removable chains or bollards, guard house	Some subdivisions have physical features that look like guard houses or private entries to discourage uninvited vehicles from entering.
Barricaded streets	no marked boundary	public streets closed by fences, planters, or concrete barriers	Many cities barricade streets creating cul-de-sac streets within the grid as a form of traffic control. Pedestrian access remains open.
Partially gated roads	no marked boundary	lift or swing arm	Rural cottage subdivisions may feature gates that are only closed for part of the year. Communities on First Nations Reserves may have gates but no walls. Pedestrian access is open.
Fully gated roads	natural features such as water or ravines	lift or swing arm	Prestige communities on islands, peninsulas, or remote areas may limit access through combined natural and man-made features.
Restricted entry bounded areas	fence or wall, and/or natural features that limit access	gate with limited control access	Suburban communities may completely restrict public access; video or telephone systems may allow visitors to be vetted by residents.
Restricted entry, guarded areas	fence or wall, and/or natural features that limit access	gate with limited control access; security guards, police or army	Suburban communities may completely restrict public access; video or telephone systems allow visitors to be vetted by residents. US-style gated communities have guards at the gates or patrolling the premises. In some zones guards may carry automatic weapons.

Figure 14: Grant and Mittelsteadt's typology of gated communities (Grant & Mittelsteadt, 2004)

3.1.2.3. Burke Typology

Five types of gated communities are defined by Burke (2001). Burke uses social and physical characteristics of various communities in Great Britain, the United States, and Australia to create a classification system that also considers geographic location. Both new, built, and existing gated communities were included in Burke's five classification types (see Table 2).

In the case of Doha, most gated communities fall into the third type: *secure suburban estate*. In this category, they share the same characteristics of residential facilities and housing types, while remaining a separate entity compared to the surrounding urban areas of Doha. Notably, these secure suburban estates could have been mixed use or dense neighborhoods.

Also, some gated communities of Doha fall into the type of *secure resort communities*, such as the lagoon compounds in the West Bay that have the features of resort style living.

Table 2: Burke Typology of Gated Communities; adopted from (Burke, 2001)

Type	Characteristics
Urban security zones	Current communities that are gated for the purpose of social problem reduction, vehicular traffic, and unwanted pedestrian limitation
Secure apartment complexes	Block vehicular and pedestrian access of non-residents; there are no open spaces, communal outdoors area, or amenities available inside the community
Secure suburban estates	Developed in the suburbs, mostly contains townhouses or low-rise villas with a gymnasium or small communal pool
Secure resort communities	Contain some lifestyle structures such as lagoon, lake, or golf course; also include features of resort style living, i.e. pathways, gardens, or decorative lighting
Secure rural-residential estates	Mostly located at the edge of rural peripheral of major centers; consist of peripheral residential subdivisions, eliminating the lifestyle features and incorporating the rural landscape with some resort-style living features

3.1.2.4. Luymes Typology

Another classification of gated communities has been created by Luymes (1997). In his classification, he focused on the access control and the solidification of gated communities' perimeters. He acquired the data from market information reviews and field surveys.

For Luymes, the physical control typology in contemporary residential enclaves is associated with the existence of socio-economic differentiation. The most prosperous gated communities have an extensive security system with a

guarded entrance that is monitored day and night. Another group of enclaves includes the retirement and resort communities, which also have guarded gate access with surrounding walls.

Luymes observed that upper-middle class ghettos favor a gated but unguarded entrance. The difference is clearer in master-planned developments where affluent houses are within guarded developments, while abstract houses are built in unguarded but only gated developments (Luymes, 1997).

In Doha, most of the compounds, regardless of class, are designed with a gate house but differ in security measures, some restricting public access and mandating identification information upon entering.

3.1.3. Arguments For and Against Gated Communities

Around the world, the development of gated communities is growing vastly, contributing to spatial and social transformation in a substantial way. Consequently, gated communities are having a great impact on urban development and the way that cities transform.

Landman captures the influence of gated communities, stating “In many instances the urban future is shaped by specific and powerful ideas. “Gated communities” is one such an idea, which has the potential to radically transform the urban environment in the 21st century.” (Landman, 2000)

The impact of gated communities on urban development has aroused a widespread discussion among scholars and observers about their validity as a

housing development strategy. According to an international review of gated communities (CSIR, 2009), debate was raised around several issues, such as the:

- Legal inferences about the enclosure of public space;
- Property values within the walled area;
- Urban fragmentation and the privatization of public utilities;
- Fallback of connection and social interaction;
- Efficiency of territorial control to inaugurate a sense of community, and
- Perception of security versus real reports of crime declining in these areas (CSIR, 2009).

Advocates claim that gated communities represent the ambition of security, satisfy the demand of consumers looking for a sense of identity and community, offer developers a significant marketing strategy in a competitive setting, increase property values, keep outside the unwelcome, and often come supplementary with attractive facilities. (Levent & Gulumser, 2007; Webster, 2002; Grant & Mittelsteadt, 2004; Blakely & Snyder, 1997).

Supporters of this development type reveal that, due to the calm traffic environment, increased vehicle and pedestrian safety is provided inside the compound. Thus, residents feel safer letting their young children play on the roads or the provided playground with their fellow neighbors.

Moreover, from an economic point of view, Foldavry (1997) argues that “gated communities are a more efficient mode of urban development because they allow collectively consumed goods to be supplied by the market” (Webster, 2002). Foldavry’s argument claims that people have the right to get the best of what the market offers in terms of investment value and quality of life. For him, gates encourage such social and economic satisfaction.

On the other side of the debate, the counter-position focuses on the social and economic costs of the phenomenon of gated communities. For instance, Blakely and Snyder in *Fortress America* state that “this phenomenon has created many problems physically and socially in urban areas, such as exclusion which has led to fragmentation and segmentation” (Blakely and Snyder, 1997).

In like manner, Mike Davis, in his book *City of Quartz*, notes that “gated communities are viewed as just such a form of ultimate segregation and militarization of public space” (Davis, 1990). In addition, they seem to divide the city’s urban fabric into single land-use islands. They create lifeless, walled streets between each other that limit what people experience in a city, leading to a loss of public life, consequently resulting in high social inequality.

Low, in his article about gated communities and the discourse of urban fear, asserts that these safeguarded enclaves with walls and gates “threatens public access to open space, and creates yet another barrier to social interaction,

building of social networks, as well as increased tolerance of diverse cultural/racial/social groups” (Low S. M., 2001). As a result, this phenomenon has evident physical and social impact on the contextual urban fabric, and on the overall city at the macro scale, resulting in an effect known as the “divided city”.

3.1.4. Advertising for Gated Communities

Gated living has been advertised by residential real estate developers as offering the very best of urban life, focusing on images about private engagement with family and friends, achieving a “life you have always dreamed about”. Developers are selling a new signature lifestyle to homebuyers and renters, including a sense of security and community in a private neighborhood fully surrounded by walls and gates. These master-planned communities offer three Ps: prestige, peace, and perfect vistas (Bagaeen, 2010).

Available residential purchasing data demonstrates that there is a marked increase in purchases and rentals of this land type (Bagaeen, 2010). The appeal is apparent in the developers' advertisements: guarantees of a sense of community that "provides the foundation for a true neighborhood experience", recreational amenities including a clubhouse that will become the "social center of your life", carefully shaped settings, and gates that provide security and feelings of remoteness and privacy (Damstra, 2001).



Figure 15: An example of Developers Company's advertisement of gated living in Doha

3.2. Neighborhood Livability

3.2.1. The Notion of City Livability

“The idea of a livable city is by no means a contemporary innovation and is actually grounded in the traditional model of the European village and hamlet” (Newton, 2009). However, over the last century people have mistreated cities to the degree that the functionality of cities has been damaged through urban policies that prefer conformity over difference and sprawl over density.

Such policies “have also sparked the rise of ecologically unsustainable gated communities and reinforced disparities by building walls between racial, ethnic and class groups” (Ouroussoff, 2009). Fixing these harms, and restoring the city to its basic role—which, according to Lewis Mumford, is “a theater of social action, and an aesthetic symbol of collective unity” (Mumford, 1986)—will involve a fundamental alteration to the urban growth approach used today.

Before cities can be drastically changed for equitable social, public, and community life, it is essential to first recognize precisely what principles constitute this notion of livability. Suzanne and Henry Lennard claim that there is a definite security and comfort that occur from social associations, which are satisfying and pleasant, bringing individuals into a community. They stated that, “a livable city provides occasions and places for such good experiences” (Lennard & Lennard, 1987).

Similarly, Mumford has said that, for the city to meet its traditional role as a supporter of diverse human contact and cultural diffusion, it must “permit and, indeed, encourage the greatest possible number of meetings, encounters, [and] challenges between various persons and groups” (Mumford, 1986). Moreover, livable cities offer varied groups of people the chance to participate in the urban experience by endorsing an infrastructure of facilities, different housing options, and job opportunities in close proximity (Newton, 2009). This close-grained diversity of uses that increases interaction among multiple urban components is seen as the main producer of urban vitality (Talen, 2008).

Connectivity is the generator of city life (Dupuy, 1991). Salingaros, in his article “Connecting the Fractal City”, believes that the life of a city is directly reliant on its matrix of connections and substructure because the geometry of the city either encourages or discourages people's movements and interactions (Salingaros, 2004).

For such connections to develop naturally, they require an enormous variety of nodes in close mixing. According to Salingaros's thinking, monofunctional zoning prevents life in a city. For him, a neighborhood is a piece of a city and must contain sufficient variety within itself to become partially self-sufficient and contribute to the dynamism of the city.

Salingaros defines the concept of a fractal city as the difference between a living city and an un-living city. The key idea is the existence of linked structures at all scales in a hierarchy, from very large to the very small. Fractals have another key property: that of coherence and self-similarity. He argues that the spaces between buildings are a fractal structure on the scale of the city itself. Enlarging block size and constructing smooth walls without entrances are anti-fractal actions (Salingaros, 2004).

Moving to Jane Jacobs' (1961) *The Death and Life of Great American Cities*, there emerges a notion that "neighborhoods that worked best had no beginnings or ends. A major part of their success depends on their overlapping and interweaving" (Jacobs, 1961). She questioned the use of borders, criticizing that borders can make a neighborhood but not the activities going on in the streets. Borders often create barriers and defeat exchanges that occur across or between neighborhoods and districts (Ghonimi, El Zamly, Khairy, & Soilman, 2011).

Jane Jacobs adds and describes the four necessary physical conditions for dynamic urban life: multifunctional neighborhoods, short blocks and connected street systems, varied-age residential areas, and a high concentration of people (Jacobs J., 2007). Most gulf cities do not align with these principles, and sometimes actively discourage them through the separation of commercial, residential, and employment activities, as well as the physical separation of neighborhoods by walls, gates, and highways, and the planning of buildings without any relation or connection to each other, or to the greater city as a whole.

3.2.2. The Notion of Neighborhood Livability

A group of livable neighborhoods will cumulatively form a livable city. The American livable city initiative states that “a livable city is a network of livable neighborhoods. Each neighborhood should have a distinct character, but each should be complete, supporting living, working, commerce, and culture.” (Initiative, 2008).

Lewis Mumford said, “for communication, the entire planet is becoming a village and, as a result, the smallest neighborhood or precinct must be planned as a working model of the larger world.” (Mumford, 1986). That means in order to achieve a more livable world, we must use a bottom up approach and focus first on the neighborhood, the district, the city, and then the region as a working model for livable communities (Newton, 2009). Hence, it is imperative to start

working at the neighborhood level as a means to consequently create more livable cities.

The neighborhood as an intermediary level of analysis was selected for the purposes of this research for several reasons. First, it is relative in its scale to gated communities, where gated communities are considered a type of neighborhood development, but sometimes expand in scale to constitute a full gated neighborhood, community, or district. Second, the neighborhood is a focal point in people's everyday lived experience, as it serves as a link between city and home in people's perception of the livability of their residential environment (Bhonsle & Adane, 2013). Third, neighborhoods have the ability to serve as an elementary unit for successful urban development (Newton, 2009).

Additionally, it is important to consider the role and importance of neighborhoods within the structure of traditional Islamic cities. Janet Abu-Lughod in her article "The Islamic City" states that "the neighborhood served as a crucial building block in the Arab world during medieval and even later times" (Abu-Lughod, 1987).

These vicinal units composed of socially related people had vicinal functions that have strengthened the role of the neighborhood even more. For her, one of the most important ways that shaped the "Arabo-Islamic city" was through

encouraging the vitality of sub-state functional units, one such sub-state functional unit being the residential neighborhood (Abu-Lughod, 1987).

In the literature, scholars have focused their analysis of neighborhood livability on a variety of factors. Christopher Alexander in his book *A Pattern Language* creates a language of 253 patterns that address architecture, urban design, and community livability on different levels, starting from geographic characteristics of a region down to interior spaces of buildings and construction details.

The patterns define a problem, then provide a solution. It gives a timeless way to improve or design our built environment, depending mainly on the idea of connection and integration between the various patterns and scales in order for the language to become complete. The language works as a network that connects the patterns together. At the scale of the neighborhood, it is especially useful for the purpose of this study.

This study will consider the neighborhood as a pattern identified by Alexander. This pattern describes neighborhoods as small human groups that generate character and energy to bring a larger community to life. "People need an identifiable spatial unit to belong to" (Alexander, Ishikawa, & Silverstein, 1977). Helping people to define the neighborhood they live in is important as it:

Gives the neighborhood some level of autonomy, keep major roads outside the neighborhood, mark the neighborhood by "Main

Gateways” wherever main paths enter, and by modest boundaries of non-residential land between neighborhoods’ “Neighborhood Boundary”.

Within these boundaries keep major roads “Parallel Roads”, give the neighborhood a visible center, a common or a green “Accessible Green” or a “Small Public Square”, and arrange houses and workshops within the neighborhood in clusters “House Cluster” with building density of -Four-Story Limit- which provide a -Household Mix-.

The boundary land of the neighborhood should encourage the formation of local center and it may contain major roads, green and parks, “Small Parking Lots” and “Work Community” for health, education, industry, etc, or anything which forms a natural edge unlike the edges of the blank walls of gated communities. These boundaries could also include meeting points which invite the residents to interact, a playground, a pedestrian “Shopping Street”, and “Public Outdoor Room”.

A well connected “Web of Public Transportation” that could be reached by walking should be supported for every local community. Walkability is a priority which has to be supplemented with properly marked “Road Crossing”. Furthermore, to enhance

the livability of neighborhoods “Street Café” and “Corner Grocery” provide a unique setting, encourage walking, and help to create the natural identity of the neighborhood (Alexander, Ishikawa, & Silverstein, 1977).

The presented patterns are useful for achieving neighborhood livability and integration with the surrounding urban fabric. With this in mind, the case study presented in this research will examine one neighborhood’s gated development and recommend an approach towards improving it to become a more livable community.

3.2.3. Principles and Indicators of Livability

Nowadays, the notion of livability has become associated with the principles of smart growth (1995) and the ideals of the Congress for New Urbanism (1993). Both movements became crucial in the history of planning theory. Although they were developed in the United States, their impact was remarkable on the urban planning ideas and approaches all over the world.

In addition, these shifts in policy dramatically altered professional approaches, most notably in influential organizations and institutions such as the Center for Livable Cities and Urban Land Institute in Singapore and The American Institute of Architects (AIA). Each of these movements and institutions has a set of livability principles, which will be presented and summarized, after which a suitable extracted set will be adopted for the purpose of this study.

3.2.3.1. Smart growth 10 principles of livable, great neighborhoods

Smart growth (SG) emerged as a widely adopted tool to implement livability and develop sustainable communities (NARC, 2012). The smart growth network developed a set of ten basic principles to create and maintain livable, great neighborhoods (SGA, 2015).

1. Mix Land Uses: Every neighborhood has a mixture of homes, retail, businesses, and recreational opportunities.
2. Take Advantage of Compact Building Design: Residents can choose to live, work, shop, and play in close proximity. People can easily access daily activities, transit is viable, and local businesses are supported.
3. Create a Range of Housing Opportunities and Choices: People in different family types, life stages, and income levels can afford a home in the neighborhood of their choice.
4. Create Walkable Neighborhoods
5. Foster Distinctive, Attractive Communities with a Strong Sense of Place
6. Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas
7. Strengthen and Direct Development Towards Existing Communities
8. Provide a Variety of Transportation Choices: Residents have the option to walk, cycle, take public transportation, or drive as they go about their business.

9. Make Development Decisions Predictable, Fair, and Cost-Effective
10. Encourage Community and Stakeholder Collaboration in Development Decisions.

3.2.3.2. New Urbanism Essential Principles of Livable Neighborhood Development

New urbanism (NU) also appeared as another common strategy for creating livability within communities (NARC, 2012). According to the Congress for New Urbanism (CNU) in the charter of NU, they assert 27 principles to guide development practice, public policy, urban planning and design on three levels: the **region**, including the metropolis, city, and town; the **neighborhood**, including the district, and the corridor; and the **block**, including the street and the building.

The following principles were set for the intermediate scale of the neighborhood as an essential element of development (Urbanisim, 2001; CNU, 2001).

1. **Walkability:** Neighborhoods should be pedestrian-friendly and many activities of daily living should occur within walking distance.
2. **Connectivity:** Hierarchy of interconnected networks of streets reduce the number and length of automobile trips and encourage walking.
3. **Mixed-Use:** A mix of shops, offices, and housing are onsite. Businesses have mixed uses in the neighborhood, block, and within the single building.

4. Mixed Housing and Diversity: This includes a broad range of housing types, sizes and price levels within the neighborhood, and can encourage people of diverse ages, cultures, races, and income levels to interact, strengthening the personal and civic bonds essential to a livable community.
5. Quality Architecture and Urban Design: Human scale architecture with special placement of civic uses, institutional, and commercial activity should be embedded within the neighborhood, not isolated in remote, single-use complexes.
6. Traditional Neighborhood Structure: distinct center and edge, public space at the center, quality of public realm, range of uses and densities within a 10-minute walk.
7. Increased density of buildings and services closer together for ease of walking to create a more convenient place to live.
8. Green Transportation: a network of high-quality public transport with adequate distribution of transit stops, permitting the public transit to become a viable alternative to the automobile.
9. Sustainability: eco-friendly developments, energy efficiency with minimal impact on the environment.
10. Green Areas: a range of parks, from larger size to the community gardens, should be distributed within neighborhoods.

3.2.3.3. Singapore's 10 principles for livable cities

During 2012 workshops held by The Center for Livable Cities and Urban Land Institute in Singapore, ten principles of livability were developed and widely circulated. The joint workshops brought together more than 62 experts, leaders, and practitioners from diverse disciplines related to urban planning and development who discussed factors that contribute to city livability.

The following principles were formulated (ULI & CLC, 2013):

1. Plan for long-term growth and renewal: a combination of long-term planning, responsive land policies, development control and good design
2. Embrace diversity and foster inclusiveness through encouraging greater interaction.
3. Draw nature closer to people by providing the city with green spaces that improve the air quality and mitigate heat from the sun.
4. Develop affordable and mixed-use neighborhoods to deliver compact, self-contained neighborhoods that are more cost-effective as they provide common amenities.
5. Make public spaces work harder by making all spaces including infrastructural spaces serve multiple uses and users, maximizing the potential of parcels of land.

6. Prioritize green transport and building options by developing an efficient public transport system and well-connected walkways to give city dwellers transport alternatives to driving.
7. Relieve density with variety and add green boundaries by combining high-rise with low-rise buildings, creating a skyline with more character, and reducing the sense of being in a crowded space.
8. Activate spaces for greater safety by improving the “visual access” to spaces so the community can collectively be the “eyes on the street”, helping to keep neighborhoods safe.
9. Promote innovative and non-conventional solutions by often looking at non-traditional solutions to overcome the challenges.
10. Forge 3P (people, public, private) partnerships where the city government and all stakeholders need to work together to ensure they are not taking actions that would reduce the quality of life for others (ULI & CLC, 2013).

3.2.3.4. AIA Vocabulary for Building Livable Communities

The AIA shared a common vocabulary with the citizens in order to create a sustainable framework for building more livable communities. The result is the AIA’s 10 Principles for Livable Communities. The application of these principles improves livability and makes conventional strip development pedestrian-friendly (AIA, 2005).

The principles are as follows:

1. Design on a Human Scale: Compact, pedestrian-friendly communities allow residents to walk and can reduce traffic congestion and benefit people's health.
2. Provide Choices: variety in housing, shopping, recreation, transportation, and employment.
3. Encourage Mixed-Use Development: Integrating different land uses and varied building types creates vibrant, pedestrian-friendly, and diverse communities.
4. Preserve Urban Centers: In order to help limit sprawl and promote neighborhood stability, it is helpful to restore urban centers, take advantage of existing streets, services, and buildings, and avoid the need for new infrastructure.
5. Vary Transportation Options: Having the option of walking, biking, using public transit, and driving reduces traffic congestion, protects the environment, and encourages physical activity.
6. Build Vibrant Public Spaces: Well-defined public places stimulate face-to-face interaction and encourage civic participation.
7. Create a Neighborhood Identity: A "sense of place" gives neighborhoods a unique character, which enhances walkability and generates pride in the community.
8. Protect Environmental Resources: through a well-designed balance of nature and development.

9. Conserve Landscapes: Open space, farms, and wildlife habitat are essential for environmental, recreational, and cultural reasons.
10. Design Matters: Design excellence is the foundation of successful and healthy communities (AIA, 2005).

3.2.4. Adopted Livability Principles for Gated Communities in

Doha

After reviewing the different principles of livability, an analysis of their applicability to Doha has resulted in a proposal of a set of points that can address the specific problems in this case study, primarily related to the identity and context of Doha.

The following points represent the extracted and adapted principles related to the scope of this particular research. These principles were incorporated into the methodologies, whereby neighborhood walkthroughs, survey questions, and livability guidelines actively considered these principles.

1. Promote compatible mixed-use developments with a diversity of land uses in close proximity, including residential facilities.
2. Create a mix of housing types, sizes, and price levels within the neighborhood, which will bring diverse groups of people together.
3. Increase density of buildings and services closer together for ease of walking and to create convenient places to live.

4. Ensure connectivity and accessibility of street networks that comprise different modes of transportation, from public transportation to private cars, walking, and cycling.
5. Establish a pedestrian-friendly public realm with a human-scaled, well-connected public space.
6. Create a public realm that encourages social interaction and embraces diversity by offering wide choices of social activities, where everyone is welcomed without any kind of exclusion.
7. Provide pockets of accessible green spaces and parks inside urban areas.
8. Activate spaces for greater safety through improving the “visual access” to public spaces so the community can collectively have “eyes on the street”, helping to keep neighborhoods safe.
9. Create a Neighborhood Identity; a "sense of place" gives neighborhoods a unique character.

The aforementioned adopted principles for this study, along with the highlighted ideas and language of Christopher Alexander, are compiled and synthesized into Table 3 for easy access and adaptation to the different methodologies employed during site analysis.

Table 3: Adapted Livability Principles and Indicators from Selected Literature

Principle	Indicator
Density and Diversity of Land Uses	<ul style="list-style-type: none"> • Mixed uses within neighborhood development (retail, commercial, housing, public facilities) • Mixed uses within buildings (retail, commercial, apartments, public facilities) • Density of land uses within close proximity • Mixed sizes of building plots • Mixed housing types • Mixed price levels for housing • Density of building with height alterations • Diversity of households from all ages, income groups, and cultures
Connectivity and Accessibility	<ul style="list-style-type: none"> • Hierarchy of boulevards, streets, and alleys • Interconnected street network to distribute traffic • Interconnected pedestrian network • Interconnected bicycle lanes • Interconnected and accessible public transportation • Well-connected public spaces
Walkability	<ul style="list-style-type: none"> • Public amenities positioned within 5 to 10 minute walking distance • Pedestrian-friendly, human-scaled public realm • Car-free streets where possible • Slow speed roads with traffic calming methods • Small parking lots • Buildings, stores, porches, and windows close to streets • Marked road crossings
Social Interaction and Co-presence	<ul style="list-style-type: none"> • Street-level stores and street cafés • Choices of social activities • Everyone is welcomed to public spaces • No kind of exclusion • Human-scaled public square • Accessible green and parks • Public playgrounds • Public outdoor “room” • Visual access to public spaces with “eyes on the streets” • Sense of place and character

3.3. Planning and Gated Communities

Due to the lack of existing case studies that address the transformation of a gated community into a more livable one, the case studies selected in this research concern best practices of planning responses to gated community development. They embody studies of gated community policy and regulation in the city of Cape Town and the planning responses to gated communities in Canada.

Each case study represents a substantial effort and creative approach to solve unique research questions. Solutions and approaches from these studies will be extracted and translated to fit the context of the study area on the micro scale, as well as the entirety of Doha on macro scale.

3.3.1. Cape Town Gated Development Policy

Overview

Cape Town came to be known as one of the first worldly cities that had a significantly higher than average number of gated communities woven into the urban fabric. This pattern mainly emerged due to safety and security concerns from apartheid law, which is a system of racial segregation that heavily influenced the number and role of gated communities in Cape Town, regardless of their market popularity.

As a result, the city has experienced far-reaching consequences from the increased number of such developments, affecting the city's functionality and

layout. Recognizing the diverse cumulative impact of gated communities and the absence of a consistent development approach, the city issued a gated development policy to address the aforementioned concerns and to offer guidance to the developers on how to control such gated developments and where they should be allowed or disallowed, and guide the investors on alternative options. Thus, the development of gated communities is regulated to ensure that developers follow adequate standards and their potential negative impacts are mitigated or minimized.

In developing the policy, the city council has followed a comprehensive approach by identifying policy gaps, conducting background research to detect all potential problems, compiling publically available policy drafts, seeking residents' feedback, opinions, supporting the required amendment, and implementing the new policies. The Gated Development Policy covers the aspects of the newly built gated developments as well as the post-established conversion of areas from public to private use.

Although the number of policies that have been set around the world concerning gated developments are quite few, this policy emerging out of the Cape Town council marks the most comprehensive, inspiring approach, full of professional graphics, detailed policy guidelines, and a unified reconceptualization of space. In comparison, other reports often rely on for elementary theoretical recommendations that are unspecific to the local urban conditions and lack the ability to make an impact.

Alternative (to Gating) Security Arrangements

The policy starts with discussing possible alternative security measures as a replacement for gating. It lists a number of measures to choose from or combine, and they can all be implemented and thus increase security without the need to block access or have a full gating.

The proposed options include the following:

- Vehicle, bicycle, or foot patrols and/or neighborhood watches
- Fortifying individual property boundaries, such as visually permeable fences, thief bars, domestic alarms, and improved outside lighting
- Space monitoring mechanisms, such as guards or CCTV surveillance systems
- Formation of City Development Districts (CIDs) as a law in the city council that includes strategies for preventing crime
- Establishment of residents' associations with effective Community Policing Forums (CPFes)
- Propose Adopt a Park program through the city council, where community is responsible for the maintenance and ownership of public open spaces, which will encourage higher levels of safety

Thus, every development initiative that involves a gated area should first consider one or more of the above alternative security measures.

The Policy

Cape Town encourages the development of integrated, open, and accessible communities. It attempts to be explicitly sensitive to the negative impacts of gated developments on urban form and function. Thus, the city adopts a careful approach in handling proposals which involve communities with gates that might affect or block general access to public spaces. Such proposals are only premeditated when subject to certain criteria that can address impacts.

To better integrate this policy in Cape Town planning practices, there should be public encouragement for firms and groups to follow the guidelines and defined mitigation measures. The following will list the policy assessment criteria and the requirements for each one them.

1. Conventional and alternative security measures: Take into account the aforementioned alternative security arrangements.

2. Access monitoring on public roads:

- The number, size and location of access points into monitored complexes should ensure direct and easy access to public areas
- Erecting gates or barriers to general public access is not permitted
- Subject to approval of design, signage, engineering, and building plan approvals

3. Access control on entirely private areas:

- Full access control is allowed on private roads
- Gates or barriers that are erected at the entrances should adhere to specific requirements to get approved
- Subject to approval of design, signage, engineering, and building plans

4. Location and scale: Large-scale enclosed areas are unacceptable, because they have a harmful impact on connectivity and city form. Hence, they should be broken down into smaller plots and entrenched within the surrounding urban fabric to make sure they do not affect access network or transect neighborhoods (Figure 16). Also, discourage the continuity of gated developments adjacent to each other, to avoid repetitive and tasteless urban environment (Figure 17).

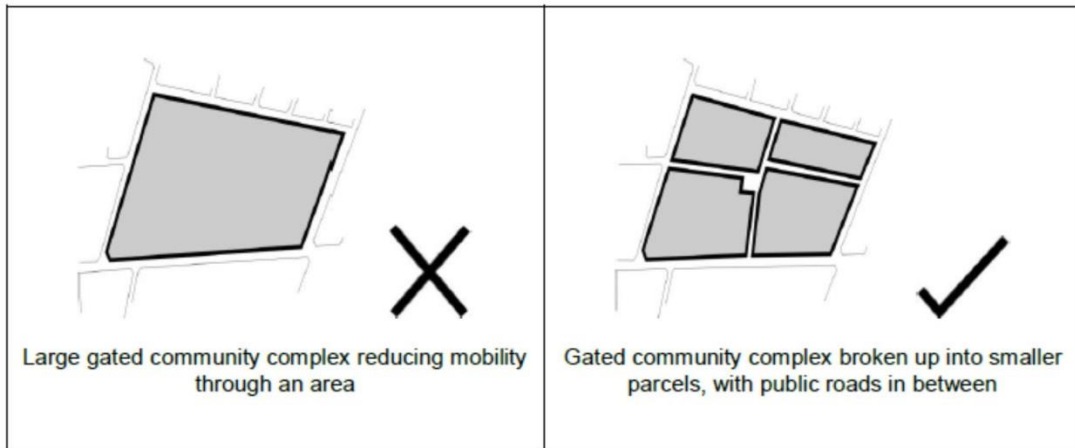


Figure 16: Breaking down the large gated developments into smaller parcels to ensure spatial integration

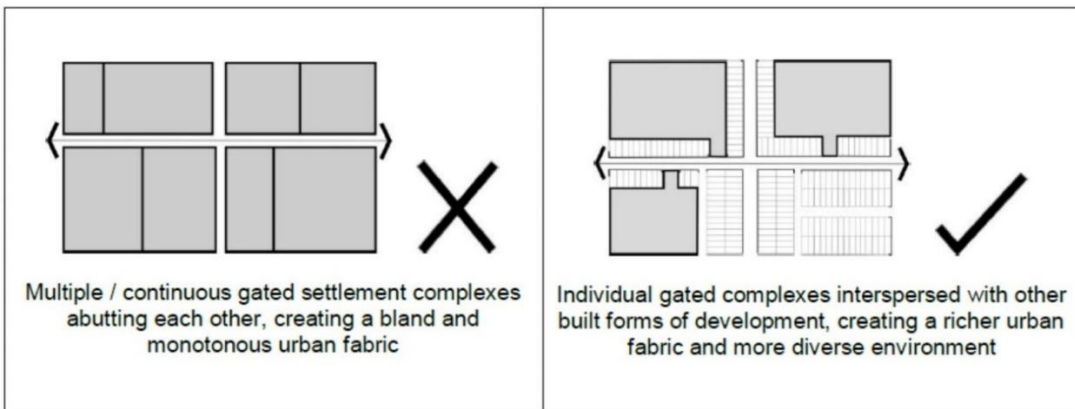


Figure 17: The distribution of gated developments to ensure the quality of the urban fabric

5. General public access and traffic implications:

- Security guards at the entrances may not force any person willing to enter the area to give personal information, as that information must be provided voluntarily
- It is not allowed for gated developments to compromise public access to natural resources (coastlines, wetlands, riversides, etc)
- It is unacceptable for gated developments to cause increase in travel time or diversions that might cause traffic congestion through the displacement of traffic flow to the surrounding areas
- All proposals are subject to engineering approvals

6. Pedestrian and other non-motorized movement:

- Provide convenient and continuous pedestrian access to public spaces and amenities located within the gated development
- The walking distance from the entrance to any inside area may not exceed a 15 minute walk
- Gated development should not compromise planned or existing pedestrian or cycling paths, or restrict access to natural resources.

7. *Emergency services and law enforcement access:* Unlimited law enforcement agency and emergency services staff access should be guaranteed even for fully private communities.

8. *Layout:*

- Layout of subdivisions should avoid creating a “canyon effect” by backing buildings onto main roads and enclosing them within high solid walls
- Gated communities should be impeded within smaller scale parcels that buffer them from the main street; alternatively, they should have more permeable surrounding walls (Figure 18).
- Breaking up the enclosed edge into pockets and intermediate opening within the enclosed parameter should also decrease the “canyon effect” and enhance the interaction between the city and such developments (Figure 19).
- Internal roads within the development, plot orientation, and open space layout should be integrated to facilitate the maximum community ownership and achieve defensible secure space. Here, houses should be oriented to face open spaces with minimum solid edges and maximum pedestrian entrances (Figure 20).

- The layout should also be integrated with the surrounding context, allowing the urban road pattern to pass through while protecting its privacy. The internal streets of the gated community should be an extension of the existing external routes (Figure 21).

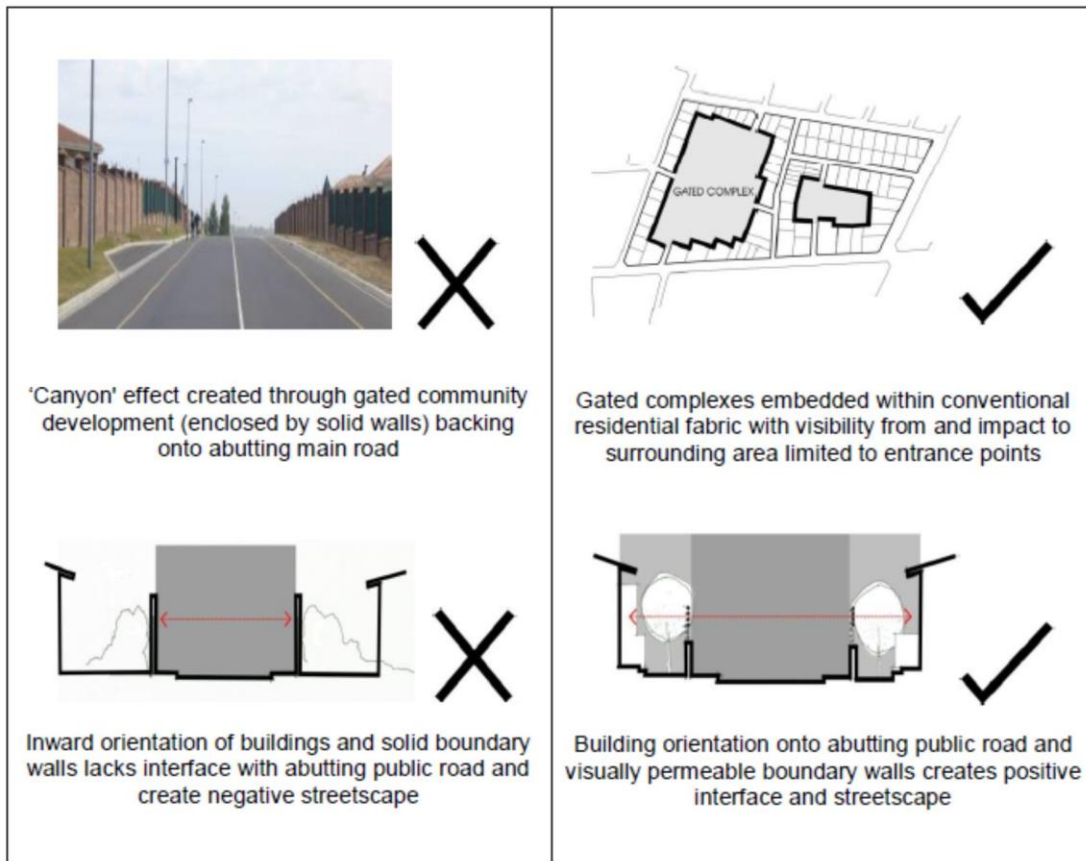


Figure 18: The canyon effect and possible solutions

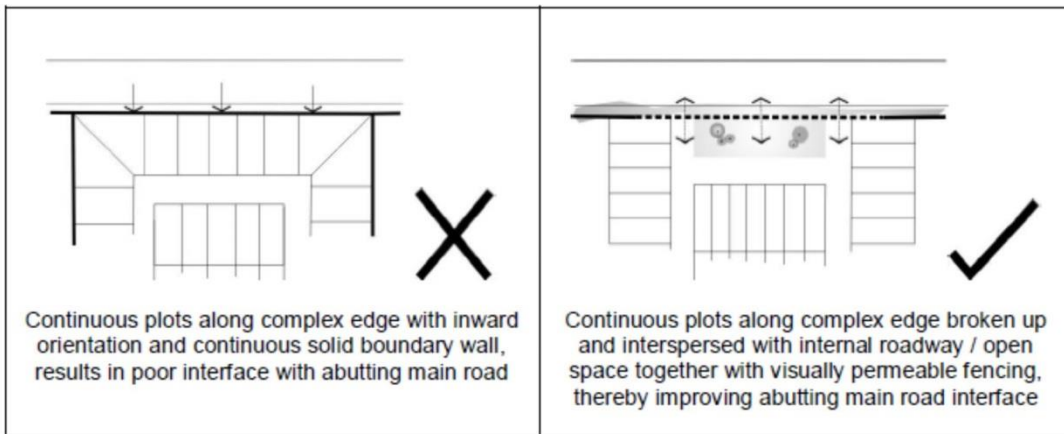


Figure 19: Breaking up the enclosed walls into pockets shall enhance the connectivity with the surrounding streets

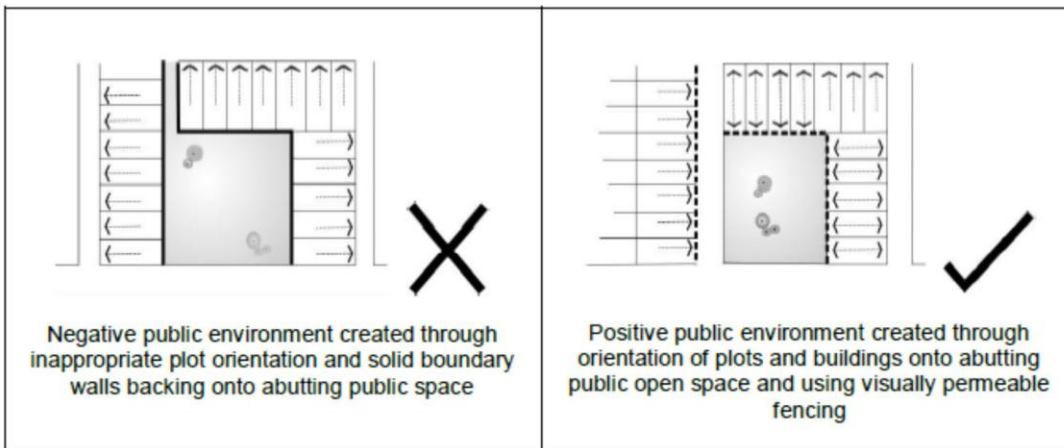


Figure 20: Transparent orientation to open spaces

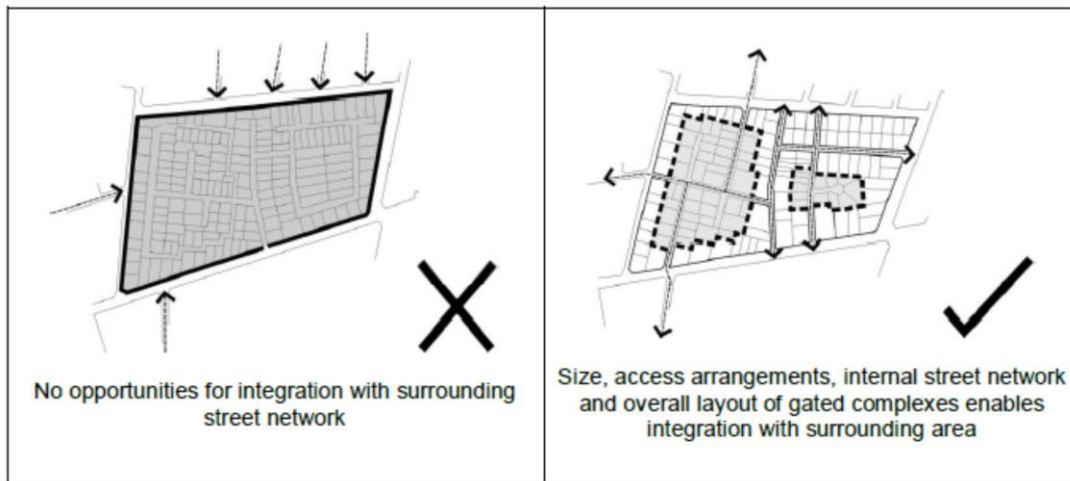


Figure 21: Gated developments integration possibilities

9. Visual impact and interfaces (edges):

- The character of the area and visual amenities should be preserved.
- Avoid high solid walls or fences, which should be visually permeable for at least 50% of their length, to assure appropriate contextual environment (Figure 22).
- In order to maximize chances of passive surveillance, form active interfaces, and encourage interaction, houses within gated developments should create direct relations with nearby public streets and spaces. This can be achieved by orientating openings (doorways, windows, and porches) onto boundary edges of the public roads and

pedestrian paths as an attempt to ensure 24/7 surveillance. This approach avoids blank walls, excessive setback distances, and the non-human scale buildings (Figure 23).

- Entrance structures should avoid over-scaling in proportion to adjacent fabric. As large, visually dominant gateways create adverse perceptions of elitism and conflict with visual, spatial, and social integration.

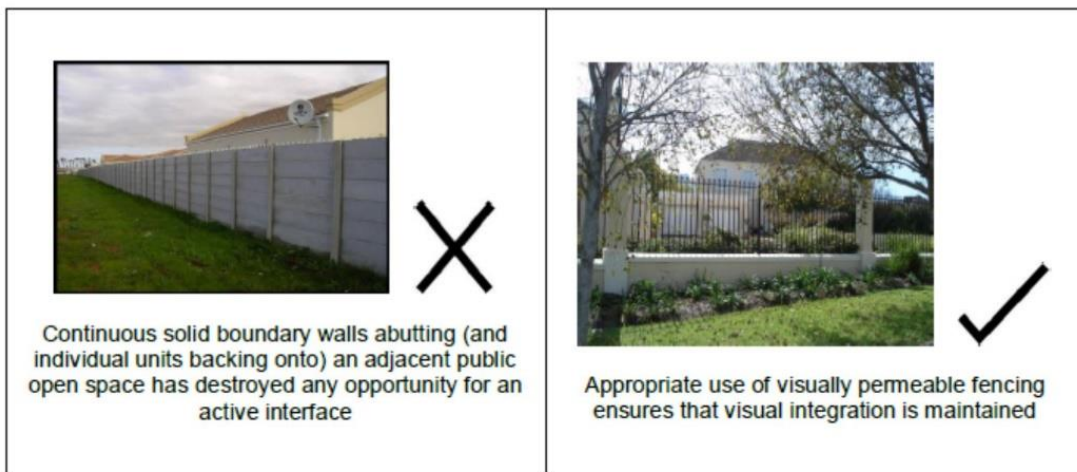


Figure 22: Creating a visual interaction between gated development and the surroundings

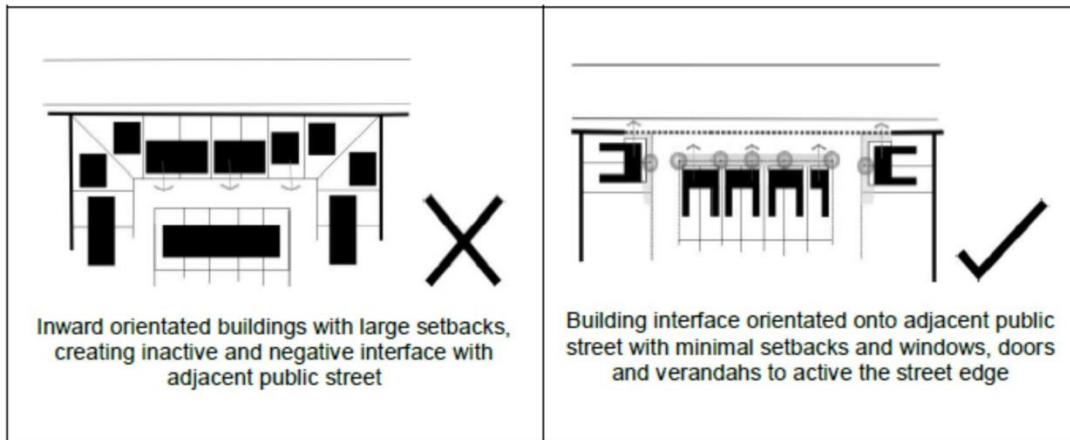


Figure 23: Passive surveillance by orienting the building interface to adjacent spaces

10. Services and infrastructure:

- Gated developments should not compromise planned or existing service infrastructure networks, or affect the continuity of normal functioning.
- Approval and agreements should be sought from the city council regarding any structure that affects public services.

3.3.2. Planning Responses to Gated Communities in Canada

A research paper presented at the conference of “Gated Communities: Building Social Division or Safer Communities?” by Gill Grant (Grant, 2013) investigates the municipal planning responses to the widespread occurrence of gated developments in Canada. It explores the ways in which local planning

authorities deal with developers' gated development proposals and which regulations and policies are implemented.

At the time of Grant's writing, the issue of gated communities had already generated significant debate. These spatial, social, and economic concerns were identified in his paper, speculating that gated developments cause an increase in housing costs, add to ethnic and class segregation, privatize essential features of the public realm, and may endorse the fear of crime.

The study reports the allocation of gated projects in Canada as well as the planning responses to them. The data were gathered via an email survey to planners across Canada, site visits, and interviews with municipal authorities and planners. Responses and findings showed that planning municipalities use a range of principles to regulate and limit gated communities, including:

- Ensuring that gated projects are well-distributed throughout the city in order to prevent a concentration of enclosing walls without through access
- Designing smaller gated projects rather than large ones
- Exploiting design and landscape guidelines to avoid uninvited features
- Maintaining transportation and pedestrian links wherever possible.
- Requiring accessible street networks to prevent enclosure
- Requiring emergency access

- Limiting fence height around projects, and ensuring their attractiveness and permeability to allow lines of sight inside and outside the project
- Restricting use of “reverse frontage” lots, or requiring front-loaded lots on all road types
- Using negotiated development permits to allow planners to discourage developers from gating and/or convincing them of other options

3.3.3. Gated Communities’ Way Forward

Besides the above-mentioned planning responses to gated communities, searching the academic work and planning systems in the UK and US reveals that there is no official planning policy concerning gated communities. However, in the US, there are some criteria for utilizing planning regulatory tools to limit them, whereby several municipalities have banned their development because of the significant impact of such development on city and citizens outside the walls. Other cities in the US consistently refuse development proposals with gates since they oppose policies and master plans (Gooblar, 2002). Nevertheless, there is a lack of policy that regulates gated communities beyond the municipality or city level (that is, state/nation).

However, an international study done in the UK presents discussions of the gated communities from an urban design perspective. In this perception, there are proposed solutions to enhance the well-being of public space in the city. The author examines three main elements at the policy and design level to mitigate the adverse impacts of gated developments and ensure a quality

public realm between adjacent ones through physical manipulation (Xu & Yang, 2008).

The authors see form and function in the gated communities, both limits and possibilities for modifying their impact on the urban neighborhood to achieve integrated urban form. Their study is centered on the gated developments and the public spaces or the streets around them and the type of interactions required to achieve an integrated urban form. Three elements are proposed to manipulate the relationship between them: land subdivision for enclosure, boundaries, and provision of public spaces and facilities in the local district (Xu & Yang, 2008).

Land subdivision for enclosure

The appropriate subdivision of land and applicable policies regulating the size of enclosures for gated communities could efficiently guide subsequent developments towards a mixed use and accessible urban form centered on local streets, where the fine-grain scale of enclosure plays an important role in the interaction of gated developments with the embedded urban neighborhood. The objective is to reduce their impact on permeability, smooth movement, and walkability.

Also, the small size of the subdivisions will allow for diverse uses of the plots even when in close proximity, ideally enhancing walkability and vitality. Similarly, it will limit the number of amenities provided inside one compound

and consequently the residents will depend largely on local facilities outside their gated community, which will facilitate social interaction between the neighborhood residents.

Boundaries

The boundary characteristics of gated communities are essential in the interaction between them and their adjacent areas. This study suggests how to deal with boundaries via the following three methods:

- Fences or walls could be much friendlier to passersby by using see-through materials, having lower heights, and incorporating greenery and adequate lighting.
- Buildings facing outward can provide diverse activities on adjacent streets and facilitate interaction between gated communities and the surrounding urban fabric.
- Natural or constructed areas for public use, such as squares or public parks, can function as mutually shared visual and physical areas between gated communities and the urban environment.

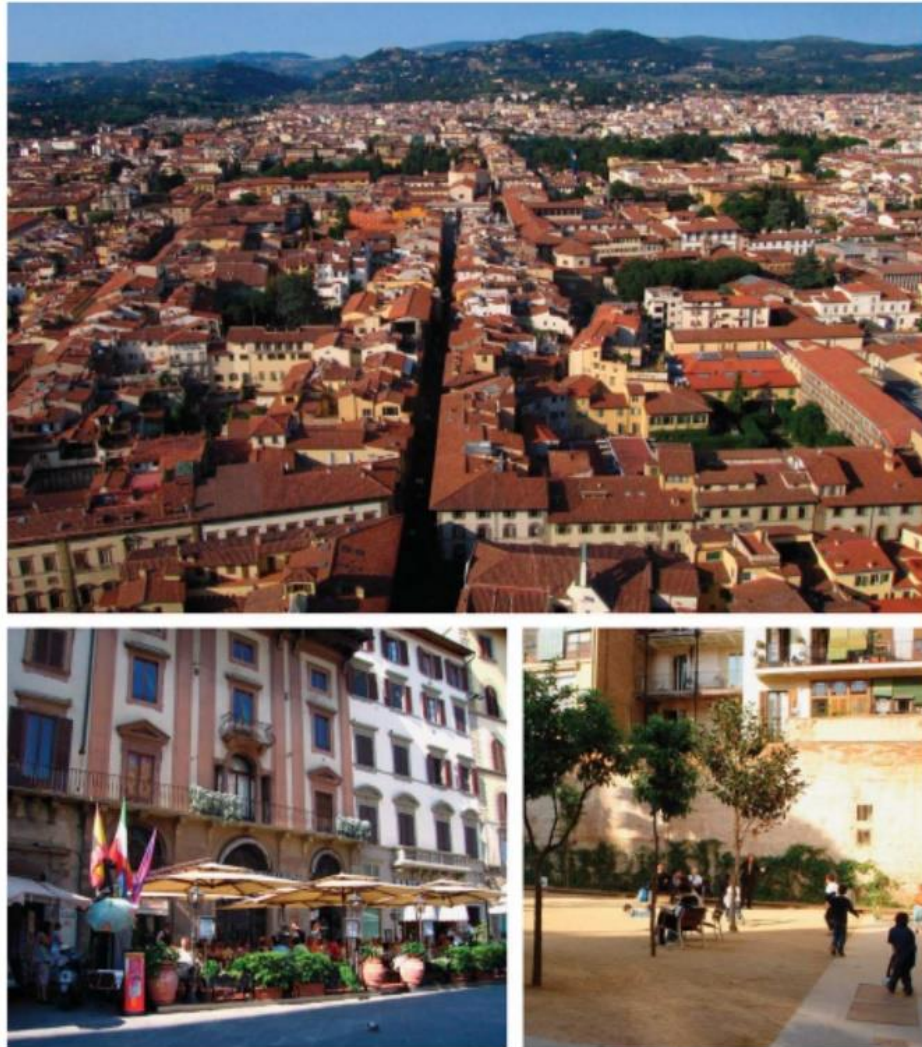


Figure 24: The way forward is embedded in our past: urban blocks in old European cities. Whereas the access to a bounded courtyard is regularly controlled and banned, the small plots occupied by the border buildings contribute to the well-defined, dense streets (above). While public services are flourishing in the front (bottom left), the semi-private space behind the building is sociable and safe, working well for the entire community of the block (bottom right) (Xu & Yang, 2008).

Provision of public spaces and facilities

Because gated communities are mainly the result of the public sector withdrawal and the deficient provision of facilities and public spaces, the spread of gated patterns could be significantly counteracted if the public sector exerted more effort to improve the conditions in the surrounding neighborhoods. The good distribution of facilities and public spaces ensures the quality of life in the district and subsequently attract people out from their residences to make use of these amenities and enjoy social interaction. Later, the boundaries can be gradually deserted and eventually dismantled if the provided public amenities are competitively decent.

Recently, some planning initiatives in the UK are moving further away from gated estates to encourage greater open access developments while maintaining the security of the residents (Norwood, 2013). In central London, new housing projects were developed in a way to invite the public (Figure 25) after UK planners acknowledged the diverse impacts of the gated communities on the city.

Thus, to maintain security in private spaces, planners are depending on soft landscaping, color-coded lighting, subtle mixes of paving, glass, and water, and height changes across open spaces to discourage trespassers. These schemes started to emerge in the UK with a number of other new projects that were clearly far from the traditional methods of ensuring safety through CCTV

systems. Soft landscaping and public spaces are “a world away from the fortress mentality which existed until recently” (Norwood, 2013).



Figure 25: Housing developments in London include large areas of public space, but use contrasting materials and plants to deter visitors from private yards. (Norwood, 2013)

It is important to note that the presented best practices of planning and urban design responses to the gated communities phenomenon are merely a few of the diverse answers. Nevertheless, in relation to Doha, they adequately addressed various approaches to integrate the enclaves with the surrounding

urban fabric, limit their negative impacts, and consequently achieve more livable communities and neighborhoods.

3.4. Conclusions

Through this overview of the literature on the definitions and types of gated communities presented by scholars, and on the notion of livability and its principles, the nature of gated communities suggests that with the proper list of livability principles and a renewed vision, gated communities may have the capacity to afford a livable environment through the demand for density and diversity of land use, connectivity and accessibility, walkability, and the provision for social interaction and co-presence.

Further, the studied best practices of planning responses for gated communities offer a theoretical and practical framework for achieving the potential of gated communities to structure a livable urban area that would generate livability on its local surrounding area and consequently on the city scale.

CHAPTER FOUR: RESEARCH METHODOLOGY

Qualitative methodologies were employed for this research, as they satisfy the nature and goals necessary for the research design. This study involved a review of secondary data of past research and literature, as well as primary data obtained by a walkthrough and observations conducted by the author in the case study area.

Morphological analysis compared the case study area to other organically grown neighborhoods within the city. In addition, surveys and semi-structured interviews were conducted by sampling different groups of focus group-stratified residents to further investigate the gated community phenomenon.

Table 5 summarizes the data collection tools used in this research.

Table 4: Tools Used in Data Collection

Method	Intent
Site Analysis	Initial site visits to offer an overview of the current condition of the study area
Observations	Using a checklist of livability principles to: <ul style="list-style-type: none"> • Check the presence /absence of livability indicators in Al Waab neighborhood backed with photos that prove observations. • Evaluate the effect of gated communities on the street level.
Morphological Analysis	Note the implications of urban design, block sizes, street networks, and connections between traditional neighborhoods and gated communities.
Focus Groups Interviews	<ul style="list-style-type: none"> • Interviews with professionals to investigate the policies and actions that are taking place in MMUP towards the development of gated communities in Al Waab (and in Doha in general) and how they are dealing with them in the QNDF. • Interviews with academics who are living in gated communities to get in-depth feedback about their living experience.
Survey/ Questionnaire	Investigate people’s lived experience in gated communities and their perception of its impacts as well as verify the absence/existence of some livability indicators through specific questions.

4.1. Case Study Selection and Gathered Data

This in-depth case study examines one neighborhood in Doha that is made up of gated communities. The case study approach was used as a means to identify patterns of real practice, and to focus attention on a few instances of the potential impact of gated communities on the livability of Doha’s neighborhoods.

This will allow an evaluation of the gated community in Doha and draw conclusions of a practical nature. Specifically, the Al Waab neighborhood was

selected on the basis that it constitutes a cluster of 21 gated communities, each of them varying in scale, design, security features, and community facilities. It was essential to select a neighborhood that has a cluster of contrasting gated compounds in order to examine the variety of gated living experiences in Doha.

For gathering data, population and demographic statistics were collected from Qatar Statistical Authority. Data were acquired for the whole of Zone 55, without any detailed information about the specific study area. An approximate estimation was done to calculate the population size through area measurements and by checking the population density outside Doha, resulting in a population estimate of 15,000 inhabitants. The following data were collected and interpolated as necessary.

- A detailed as-built map and parcel map were collected from MMUP, Lands and Survey Department.
- Land use map from the MMUP.
- Future metro lines and stations location map from the MMUP and Qatar Rail website.
- Google Earth aerial photos.
- Compound names from Qatar Map website.

Several best practices of planning responses to gated developments were carefully chosen and studied in order to share similarities with the conditions of Al Waab. Internet browsing of real estate companies and developers' websites

added to an understanding of the nature of their gated developments and provided information about their marketing strategies and advertisements. AutoCAD and Photoshop software were used for mapping and graphic illustrations. Further data were collected through tools described in details within the following section.

4.2. Data Collection Tools

4.2.1. Site Analysis

A primary site visit done by the researcher included a walkthrough assessment of the site to provide a general idea of the current condition of Al Waab neighborhood and to collect data that would assist in the site analysis.

The walkthrough helped direct the scope of research and the nature of data needed for the site analysis. It also helped when formulating the research questions and hypothesis by providing a balance between the reviewed literature and the current situation of gated communities in real practice. In addition, the applicable principles of livability were selected to formulate the livability indicators checklist to be used in the next phase of data collection (i.e., the observations).

4.2.2. Observations

A number of site visits were made around gated communities throughout the Al Waab study area to observe their setting, type, locations, structure, size,

security measures, and provided facilities. The measures sought to discover: how people are using the neighborhood, the behavior of residents' entry, and the amount of pedestrian and vehicular traffic observed.

Photographs of the different site locations were taken to facilitate a visual analysis of the various communities and conditions. Notes were taken randomly by the researcher, informed via the use of the formulated livability checklist (Table 6) to check the presence/absence of each of the livability indicators. The studied area was visited multiple times during different times of the day in order to have a complete picture of the site condition. Notes were taken by the researchers, which helped formulate survey questions and provide a greater understanding of residents' responses to the questionnaire and the personal interviews.

Table 5: Observations Checklist Used to Evaluate the Livability of the Study Area

Principle	Indicator	Status
Density and Diversity of Land Uses	• Mixed uses within neighborhood development (retail, commercial, housing, public facilities)	
	• Mixed uses within buildings (retail, commercial, apartments, public facilities)	
	• Density of land uses within close proximity	
	• Mixed sizes of building plots	
	• Mixed housing types	
	• Mixed price levels of housing	
	• Density of building with height alterations	
	• Diversity of households from all ages, income groups, and cultures	
Connectivity and Accessibility	• Hierarchy of boulevards, streets, and alleys	
	• Interconnected street network to distribute traffic	
	• Interconnected pedestrian network	
	• Interconnected bicycle lanes	
	• Interconnected and accessible public transportation	
Walkability	• Public amenities positioned within 5 to 10 minutes walking distance	
	• Pedestrian-friendly, human-scaled public realm	
	• Car-free streets where possible	
	• Slow-speed roads with traffic calming methods	
	• Small parking lots	
	• Buildings, stores, porches and windows close to streets	
Social Interaction and Co-presence	• Street level stores and street cafés	
	• Choices of social activities	
	• Everyone is welcomed to public spaces	
	• No kind of exclusion	
	• Human-scaled public square	
	• Accessible green and parks	
	• Public playgrounds	
	• Public outdoor “room”	
	• Visual access to public spaces “eyes on the streets”	
	• Sense of place and character	

4.2.3. Morphological Analysis

In order to identify the differences between the structures of the traditional organically-grown neighborhoods and the neighborhoods with larger clusters of compounds, a morphological analysis was necessary to note the implications of urban design, block sizes, street networks, and connections. Using satellite images, circulation tracks, and building form maps, this study compares the Al-Asmakh neighborhood and the Al Waab study area.

4.2.4. Resident Surveys and Focus Group Interviews

Qualitative questionnaire surveys and interviews were undertaken to facilitate the gathering of detailed information in order to have a better understanding of gated living experiences. The alternative method of a quantitative survey would not have allowed the depth of understanding needed to address the objective of this thesis. Moreover, a qualitative approach is considered to be a more sensitive way of conducting research (Quintal, 2006).

The interview technique applied in this research can be best reported as semi-structured interviews of focus groups to support the evaluation of the interviewee experience and ideas. This technique enabled understanding and access to experiences, behaviors, and views, which were unattainable by the research through observation.

The research surveyed residents of gated communities in the Al Waab neighborhood, as well as other gated communities in Doha when access was

available. Further, four academics of architecture and urban planning in Qatar University participated in a focus group of experts who live in a gated community. Their responses are considered “expert” because of their professional knowledge and lived experience. While a more diverse sample would have certainly benefited the research, a constraining factor was that group participants must live in gated communities.

Resident survey participants in Al Waab were approached on the basis of contacts through family and friends, due to the nature of security of gated communities there. In addition, the questionnaire was posted online on social media groups living in Doha. The social groups are composed of diverse cultures, and the survey was addressed to people residing in compounds only.

The online questionnaire survey was sent through emails and Facebook messages for family members and friends who are living in compounds, who then used a branching technique to distribute it to a number of their neighbors. Additionally, the questionnaire was posted on four of the most popular social groups in Doha.

The survey received 131 responses. This study interprets the high response rate as indicative of topical interest, as well as a desire for individuals to share their lived experience in order to seek further knowledge about the topic. It also highlights the importance of social media groups in discussing and communicating when critical issues arise.

The questionnaire survey addresses the related key themes of the research (gated living and neighborhood livability), the questions of the thesis, and the data needed to address the hypothesis proposed in the beginning of this study.

The questions pertain to the following set of identified themes:

- The appeal of gated communities' living and the motivations for moving there
- Land use, facilities, and housing types
- Walkability and accessibility
- Social interaction and sense of community
- Level of satisfaction and willingness to live in a non-gated community
- Nature of gated community demographics in terms of cultural background, age, and household structure

These themes are addressed in the questionnaire through a total of 31 questions under two main titles: Gated Living and About the Interviewee. The questions were organized in a way that best communicated the objectives of the survey to the respondents so they could move from broader questions to more specific questions. The questions' answers were designed in multiple-choice form, allowing for more than one answer to some questions.

In the case when the question involved the respondent's point of view, an "other" option was given to them as an open-ended response to add comments. This permitted residents a chance to state any needs or concerns that may have been unanticipated by the author within the series of the structured answers. The survey form is attached in (Appendix A).

Focus group included interviews with academic professionals and development institution professionals:

- Academic Professionals

A copy of the extended proposal was submitted by hand to all the interviewees prior to the scheduled time of the interview. This enabled participants to become familiar with the scope of the research, the case study description, and the type of information needed.

Three of the participants hold the position of Assistant Professor and one is a PhD student. They are all based in the Department of Architecture and Urban Planning in Qatar University. It is important to note that three of them reside in the Al Mirqab2 compound, which is situated inside the studied area. The remaining participant reside in a compound that is outside the study area.

During the face-to-face semi-structured interviews, the participants agreed to answer the questionnaire as well as offer additional views and comments on their lived experience and research approach. The interviews took place in participant offices inside the department of architecture in Qatar University.

- Development Institution Professionals

In terms of understanding the rationale of gated communities' development, as well as the planning policies that are followed and imposed on the developers, it was deemed important to interview representatives of the urban planning development institutions.

Two interviews were conducted in the participants' workplace. It is interesting to point out that both participants within the category of Development Institution Professional actually lived inside a gated community.

Table 7 lists the initials and affiliations of all focus group participants, as well as the date and venue of each interview.

Table 6: List of Interviewees, Their Positions, Affiliations, and Date and Venue of the Interview

Participant	Affiliation	Date and Venue
Academic Professionals		
D. B. Assistant Professor	Qatar University (QU), Department of Architecture and Urban Planning (DAUP)	Monday, 15 th June 2015, 4:20 p.m., QU faculty offices, 1 st floor
D. O. Assistant Professor	QU, DAUP	Monday, 15 th June 2015, 4:40 p.m., QU faculty offices, 1 st floor
F. F. Assistant Professor	QU, DAUP	Monday, 15 th June 2015, 4:00 p.m., QU faculty offices, 1 st floor
L. B. PhD Student	QU, DAUP	Thursday, 25 th June 2015, 1:30 p.m., QU faculty offices, 1 st floor
Development Institutions Professionals		
E. S. Site Engineer	MMUP Urban Planning department	Sunday, 23 rd Aug 2015, 12:00 p.m., MMUP tower building, 10 th floor, West Bay
A. T. Civil Engineer	MMUP Al Rayyan Municipality	Sunday, 25 th Oct 2015, 10:00 a.m., Al Rayyan Municipality building

4.3. Population and Sampling

The study uses convenience sampling of different groups of people for survey responses, focus group composition, and selection of residents. The interviews of focus groups targeted academics and professionals, and the questionnaire

survey targeted residents of gated communities specifically in Al Waab and other gated communities in Doha.

Since the questionnaire survey was one of multiple methodologies used in data collection for this research, the convenience sampling was suitable for providing the required data built on people's interest in the subject and willingness to engage in it.

The provided data were used to crosscheck the author's observations, which helped in formulating a generality of views. Furthermore, another reason to choose the convenience sampling was the unavailability of the exact population size of the studied area. Although the authorities provided data for the whole zone, there was no clear number discernable for the target population. The questionnaire was meant to explore the living experience of gated community residents and the perception of livability.

4.4. Conclusion

This chapter has described how the research was conducted. The case study was selected in the interest of providing a comprehensive understanding of the gated community in Doha. Qualitative questionnaire survey, semi-structured interviews, observations, site analysis, and morphological analysis were applied as data collection tools to ensure a deep understanding of the residents' experience and potential impacts of gated community on the livability of the neighborhood.

A selection of secondary data sources were also examined, including academic literature. Along with collecting the targeted data through the application of the formerly stated methods, a site analysis and mapping exercise were carried out for the different layers of the urban fabric that relate to livability principles.

CHAPTER FIVE: ANALYSIS AND RESULTS

5.1. Site Analysis

Al Waab site analysis was composed from various research stages. The first part is the site analysis, where the Al Waab neighborhood site was studied in terms of location, context and adjacent properties, land use and urban characteristics, demography, building type, and transport characteristics.

Following these investigations, plans and strategies were developed with reference to earlier observations related to the present situation and potential impact of Al Waab gated communities on the four adopted dimensions of livability.

An assessment table (checklist) was used to check the presence/absence of livability indicators. Later, the results of the morphological analysis, the focus group interviews, and the survey analysis were compiled and analyzed.

5.1.1. Location and Context

Al Waab neighborhood is located in Zone 55 East, approximately 10 kilometers from the Corniche, in the southwest of Doha. It is situated outside the jurisdictions of the Doha municipality and is administered by the Al Rayyan municipality. It was once considered a periphery of the core traditional city, but now it is included as part of greater Doha.

Al Waab neighborhood is surrounded by the neighborhoods of Mehairja in the north, Al Soudan in the west, Abu Hamour and Ain Khaled in the south, and Al Rayyan to the east.

The neighborhood has witnessed tremendous growth since the mid-2000s, resulting in the construction of numerous residential compounds to house expatriates, villas, and commercial and medical developments.

The urban evolution of Al Waab is shown in the aerial photos below (Figure 27). They illustrate the urban growth from 2003 until 2015. Initially, Al Waab started with scattered compound developments as well as a small number of individual villas in the older sections, with an abundance of surrounding vacant land. Later, the compounds expanded in number and size to form their current cluster of today.

Through the examination of aerial photos, the urban fabric of Al Waab is regarded as a regular grid system pattern that follows the divisions of land created by the government and other planning municipalities in order to allocate the plots to Qatari land owners.

Key locations in and around the neighborhood include Doha Sports City (home to many of the venues of the 2006 Asian Games); Qatar's largest stadium, Khalifa Stadium; and Qatar's largest structure, Aspire Tower; as well as Qatar's largest and most famous mall, Villaggio Mall, themed after the Italian city of Venice.

The neighborhood features a number of schools inside and around its boundary, including the Doha College, Newton British School, and the American School of Doha.

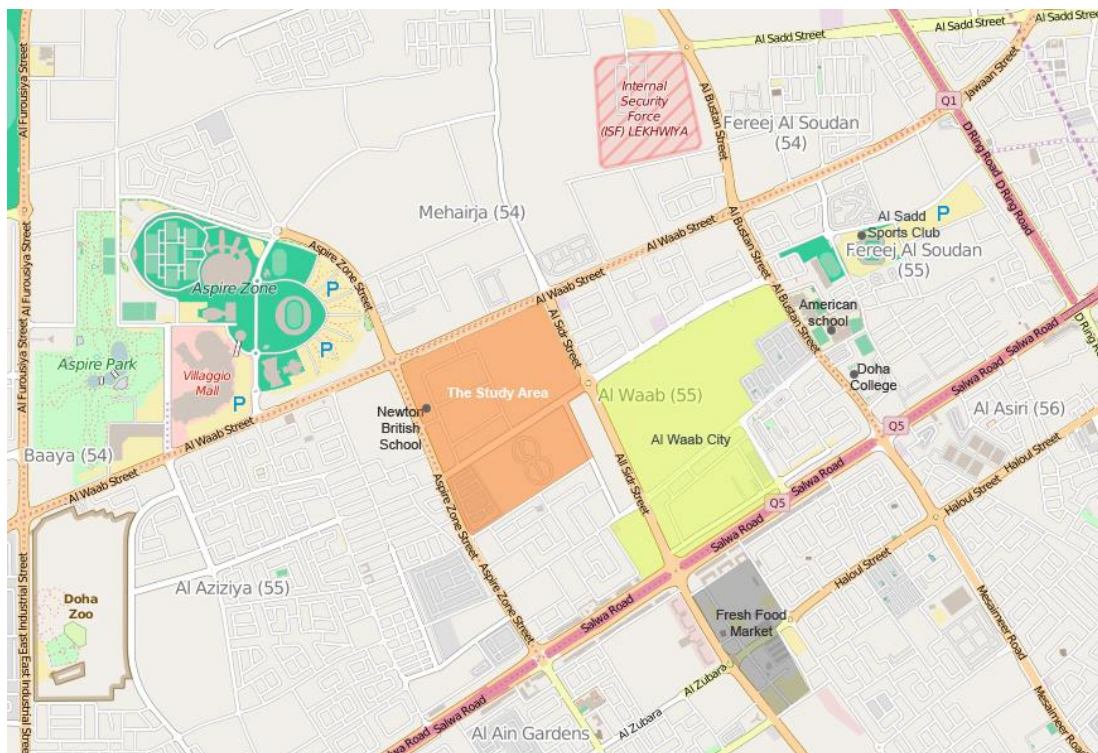


Figure 26: Study area location and context (Open street map, edited by the author)



2003



2004



2005



2006



2007



2008



2009



2010



2011



2012



2013



2014



Figure 27: Al Waab Neighborhood Urban Evolution Timeline (Source: Google Earth)

Al Waab City, a large-scale residential development, is currently being constructed within the neighborhood boundaries over 1.25 square kilometers, being marketed as a lush landscaped “city within a city” project, carried out by a group of Qatari investors. The city has been advertised as a place to celebrate life. “It will offer around 2,200 housing units, ranging in size from apartments to villas, accommodating over 8000 people. The “city” will offer a diverse mix of low-density, low-rise neighborhoods (northern, central, and southern districts) encompassing luxurious living, office accommodations, retail space, and parking spaces” (City, 2012) (Figure 28).

The concept of this development is an enlargement of the idea that a gated community can become a gated town, entirely self-contained. This type of

development has far-reaching impacts on the spatial urban fabric and the social life of the city. It is interesting to note that the completed parts of Al Waab city are walled and gated developments within the walls of larger gated communities, resulting in doubled-walled residential developments.

The specific study area selected for the purpose of this research has a strategic location surrounded by main key roads, namely Al Waab Street, Sports City Street, and Wholesale Market Street (Figure 30).



Figure 28: Al Waab City Main Districts (City, 2012)



Figure 29: Al Waab City Vision for the northern district (City, 2012)



Figure 30: Satellite image for the location of the study area (Source: MMUP)

5.1.2. Land Use

The land use map indicates that the area of study is dominated by residential use of single family attached/detached villas located inside the development of compounds, as well as a small number of individual villas with commercial uses located on Al Waab Main Street.

In total, there are 21 gated developments (residential compounds) of various sizes and design. The rent varies between 14,000 and 18,000QR per month for a 3- or 4-bedroom villa on a compound with facilities.

Some of the residential villas overlooking Al Waab Main Street have recently transformed into other uses such as medical, beauty, laboratory, and retail. A few villas located in the inner part of the neighborhood have been transformed into nurseries and another one is used as a short-term rental villa (offering an alternative to hotels).

The area also comprises a number of “on hold” vacant lots which (Figure 33), according to the results of this study, might have a potential land use to enhance the livability of the study area. The study area also contains a number of housing amenities inside each compound that vary according to the development size and the level of luxury provided.

Most of the compounds in the study area include a great number of amenities, which may be related to the large size of the compounds and the associated luxurious lifestyle. Compared to other gated communities, these amenities are

more varied than what is usually available in compounds in other areas of Doha. Specifically, these amenities include: clubhouse, swimming pool, gym, and playground.

Some of the large compounds include one or more of the following: small mosque, supermarket, small nursery, green space, café, and tennis or basketball court. It is important to reiterate that all of these amenities are completely private, not connected, and located inside the compounds for use by the residents only.

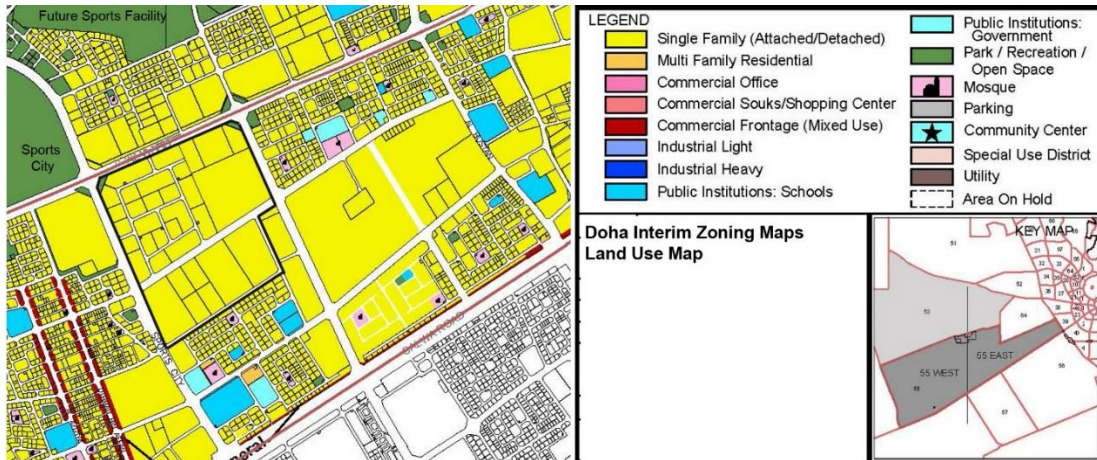


Figure 31: Land use map (Source: MMUP)

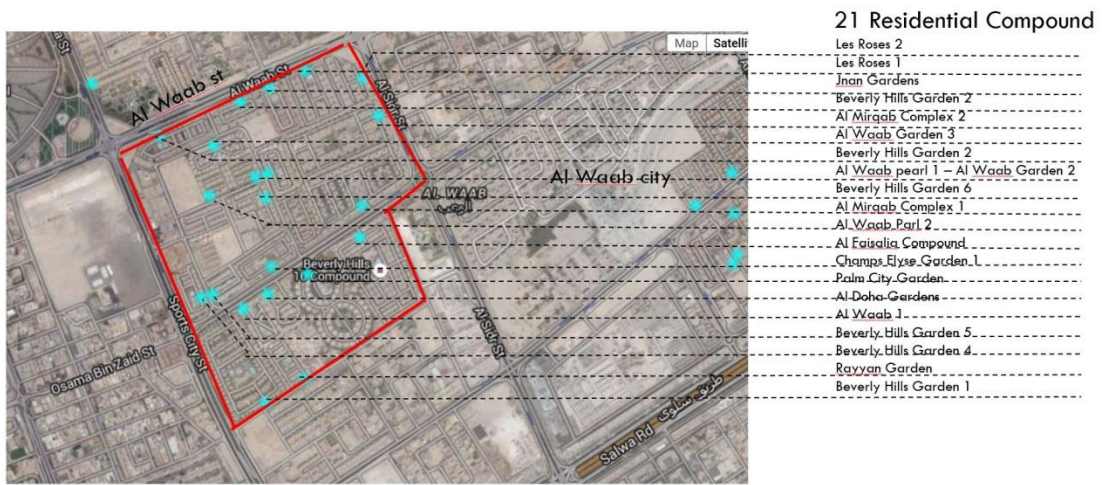


Figure 32: The locations and names of the residential compounds inside the study area (Qatar Map, 2014, edited by the author)



Figure 33: Examples of the vacant lots that are located inside the study area (Source: Author)

5.1.3. Building Heights

The studied area is characterized by low-rise (up to two-story and penthouse in some cases) villas, whether separate, free-standing or inside compounds. Thus, it is considered a low-density residential area. The low-rise urban fabric provides a rather human-scaled environment but only for the internal spaces of the compounds. Outside the compounds, people are delimited by blank walls and wide streets without any connection to the surrounding human infrastructure.

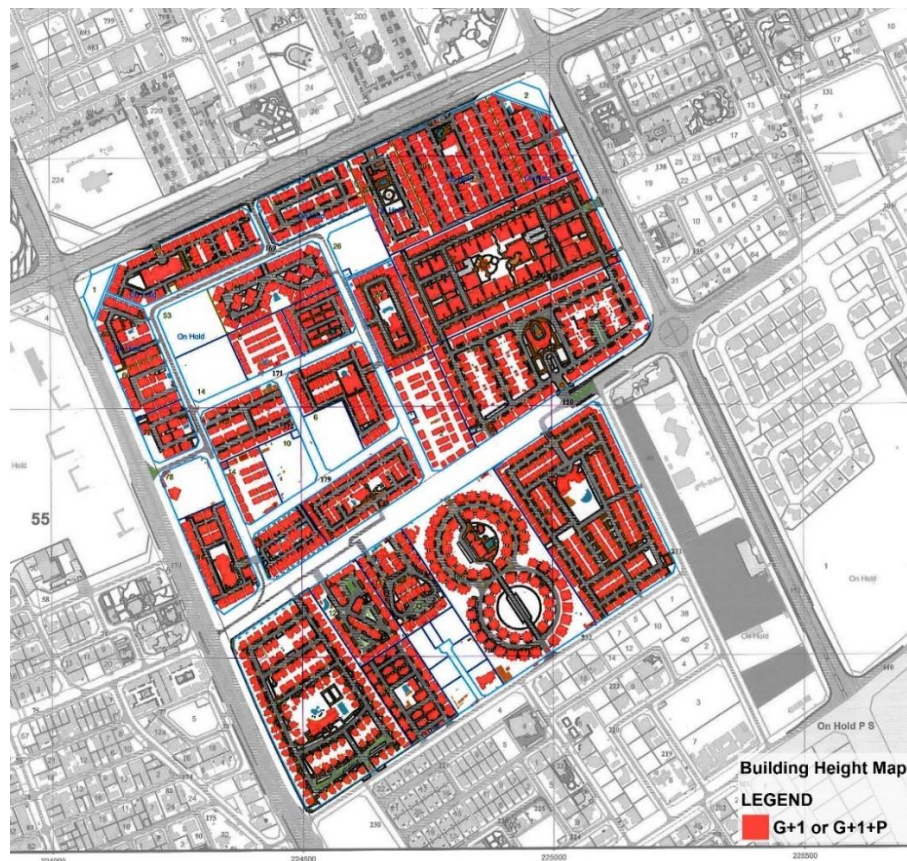


Figure 34: Map of the study area shows the building heights (Source: Author)

5.1.4. Demography

Major parts of the neighborhood were initially built to house the increased expatriate population and, until the date of this writing, Al Waab neighborhood is still one of the favorable locations among expatriate populations for Westerners (United States and Europe), Arabs, and Asians.

The single land use with low rise villas has resulted in low population density. Data were provided from authorities about the total population of Zone 55 East, without any specific number for the population of Al Waab neighborhood by itself.

Zone	Gender الجنس		Total مجموع	المنطقة
	اناث Female	ذكور Male		
53 New Al Rayyan / Al Wajba / Muaiter	23515	52776	76291	الريان الجديد / الوجبة / معيثر 53
54 Fereej Al Amir / Luaib / Muraikh / Baaya / Mehairja / Fereej Al Soudan	8444	15147	23591	فريج الأمير / لوعيب / مريخ / بعيا / محورية / فريج السودان 54
55 Fereej Al Soudan / Al Waab / Al Aziziya / New Fereej Al Ghanim / Fereej Al Murra / Fereej Al Manaseer / Bu Sidra / Muaiter / Al Saliya / Al Mearad.	51656	86917	138573	فريج السودان / الوعب / العزيزية / فريج الغانم الجديد / فريج المرأة / فريج المناصير / بوسدرة / معيثر / السيلية / المعارض. 55

Figure 35: Population by Gender and Zone, 2010

5.1.5. Compound Type

According to the reviewed studies that classify gated community types in Chapter 3, the type of gated communities located in the study area can be

described as entirely private with private internal spaces and roads that have full access control (Figure 36). Guards at the gates completely restrict public entry except for pre-authorized visitors. They also fall into the type of prestige community that are mostly provided by companies to their highly-paid expatriate employees with few shared amenities and facilities.



Figure 36: Gated communities type in the study area adopted from (Town, 2007)

Housing type inside the compounds varies between attached and detached villas. Each compound provides villas with several floor plans to accommodate prospective tenants (Figure 38). The architecture styles of the villas differ from one compound to another; some are identified as modern design and others are rather traditional, going with whatever suits the designers and owners' tastes and desires.



Figure 37: The security measures at the entrance of one of the compounds inside the study area (Source: Author).



Figure 38: Map of Palm City gardens compound located inside the study area, which shows the different types of villas provided

5.1.6. Public Realm

The area is considered a luxury living neighborhood due to the high rents and the attractive names of the compounds, such as Beverly Hills Gardens and Champs Elyse Garden. However, the public realm in the area is very poor, deserted, and mostly empty. It is thought that the disparity between the two comes from the deliberate minimization of routes that connect non-public realms. Alleys between compounds are walled on both sides and lack sidewalks. These areas of public realm are not inviting for pedestrians and generate feelings of unease and invisibility. The compounds act as prestige islands of high-end living that are disconnected from the low-quality surrounding public realm.



Figure 39: The lack of proper sidewalks inside the study area in-between of the gated communities (Source: Author)



Figure 40: The deserted public realm inside the study area. (Source: Author)

There is a severe lack of public spaces in the area, where much of life takes place in restricted environments that require entry permit. They have hidden the life away from the city, leaving the streets empty from any kind of life except passing cars.

5.1.7. Transportation

Currently, the area is accessed by several main roads, including Al Waab Street, which is distinguished by its street lamp design (Figure 41). It is a vital artery that ensures the area's connectivity with the inner city. It is also the same street that intersects after a short distance with Al Shamal expressway, one of the most important expressways in the city.

The Sports City Street creates connectivity to the Aspire zone. The Wholesale Market Street connects the area with the major fresh food market and the southern parts of the city. The Al Tuwaim Street serves the site from the inside and connects it to the adjacent properties. Thus, the neighborhood has easy access to most of the major vehicular routes.

High traffic is periodic according to school times and sports events held at the Aspire Zone. Cycling routes are featured in Al Waab Main Street on both sides of the road up until Villagio Mall. They are part of a city-wide initiative (Qatar National Master Plan) announced by MMUP in 2010. This will involve installing dedicated cycling facilities with each new road project, to encourage sports and activities and in an attempt to find a transportation alternative to cut down on

traffic jams and improve public health. However, the incorporated cycling lanes still will not perform as a transportation alternative since they are neither connected nor part of a well-established connectivity network.

A similar disconnect exists in the case of pedestrian paths, as they exist on both sides of the main streets, but disappear when one reaches the inner roads of the urban fabric. The paths are merely a liner to the edge of the walls that overlook the main street, with no penetration points into the urban fabric except for the exclusive and gated main entrances.

In regards to public transportation, bus services of Karwa for greater Doha are provided along Al Waab Main Street and Sports City Street with three bus stations located on the side of the study area (Figure 42). Current under construction Phase 1 of Doha metro has an East-West Gold Metro Line starting at Villagio Mall and running under Al Waab Street (Kovessy, 2013). It follows the road northward, then curves east, passing by a number of stations including Msheireb station, lastly turning south to reach Doha International Airport.

Two metro stations are located near the study area. Villagio station is located in the western border of the area, opposite to Aspire Zone. Sports City station is located on Al Waab street within the border of Al Waab neighborhood. Figure 44 shows the metro lines going along Al Waab street and Salwa, with the projected stations.



Figure 41: Al Waab Main Street

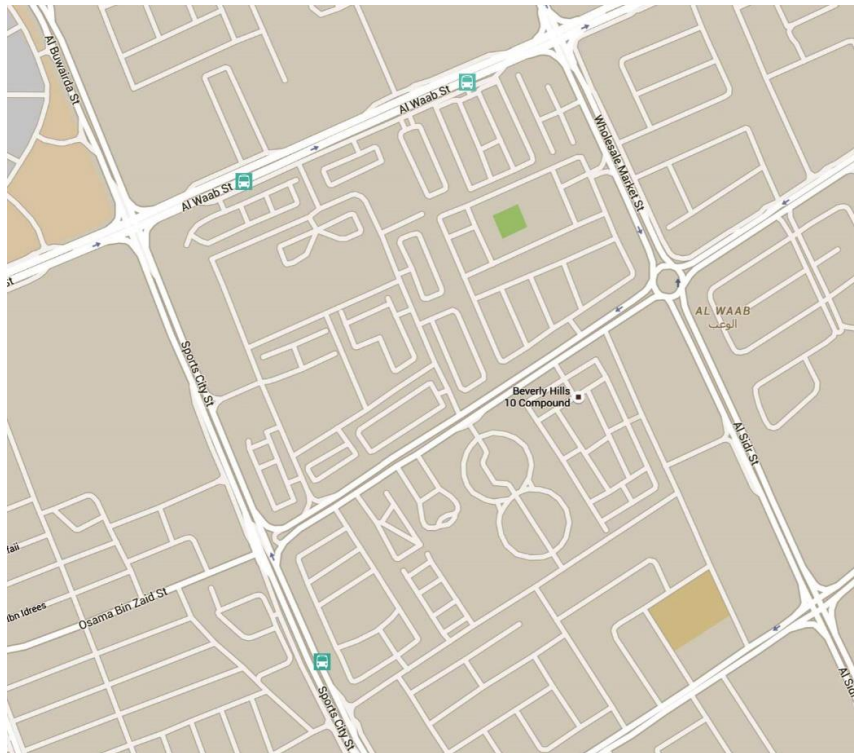


Figure 42: Bus stations located in the study area (Source: Google Maps)

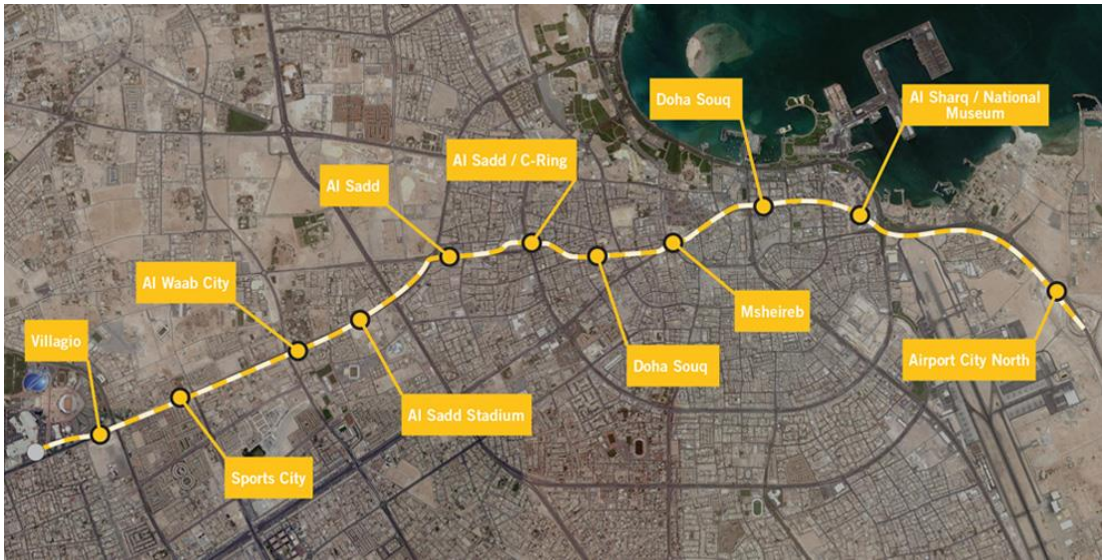


Figure 43: Doha Metro: Phase One, Gold Line (Kovessy, 2013)

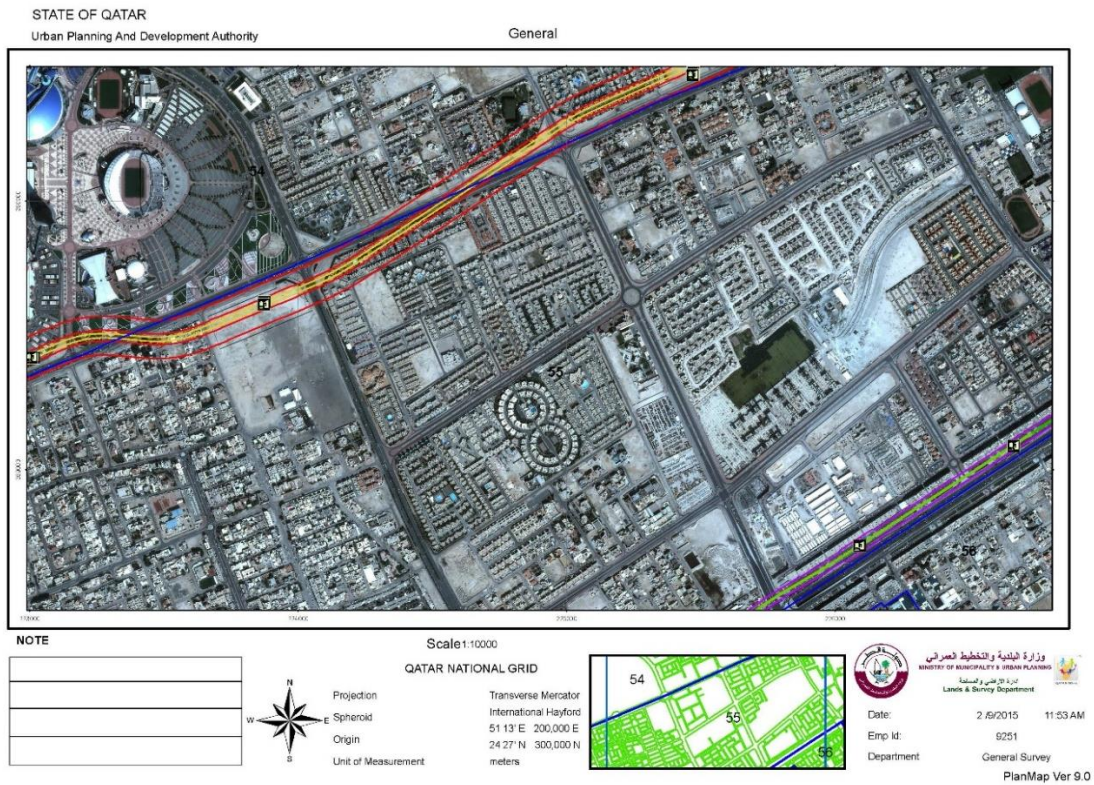


Figure 44: Metro lines and stations nearby the study area (Source: MMUP)

5.2. Observations

After conducting walkthrough visits to collect general data about the site, a significant amount of information was collected and used in the aforementioned site analysis. The observation technique of data collection was applied mainly by evaluating the site characteristics against the adopted livability dimensions in this research.

The observed data for each dimension were mapped. The mapping discloses a specific image of gated communities' potential impact on the neighborhood livability. The findings were further analyzed against a livability checklist to determine the status of each livability indicator.

Density and diversity of land uses

The whole territory of the study area tends to be organized into disconnected zones of mono-functional use for single-family residential accommodation, almost exclusively occupied by higher-income populations. The residential accommodations are designed to be located within gated developments and a small number of individual gate-free villas.

Other uses in the area are limited to the newly converted liner plot on the main street of Al Waab for commercial use and one secondary school, the Newton British School. In addition, a few former inner villas have been converted to short accommodation services and nurseries. The housing is limited to two-story villa type, either attached or detached.

Facilities provided inside the compounds are completely private to the residents. One mosque (Masjid Al Mana) is located near the study area; however, it is mostly reached by car. The newly converted villas of small businesses are struggling due to incompatible designs that cannot accommodate such commercial use, and they face difficulty due to a lack of proper accessibility and parking spaces. Thus, there exists a markedly high risk of failure for these services.

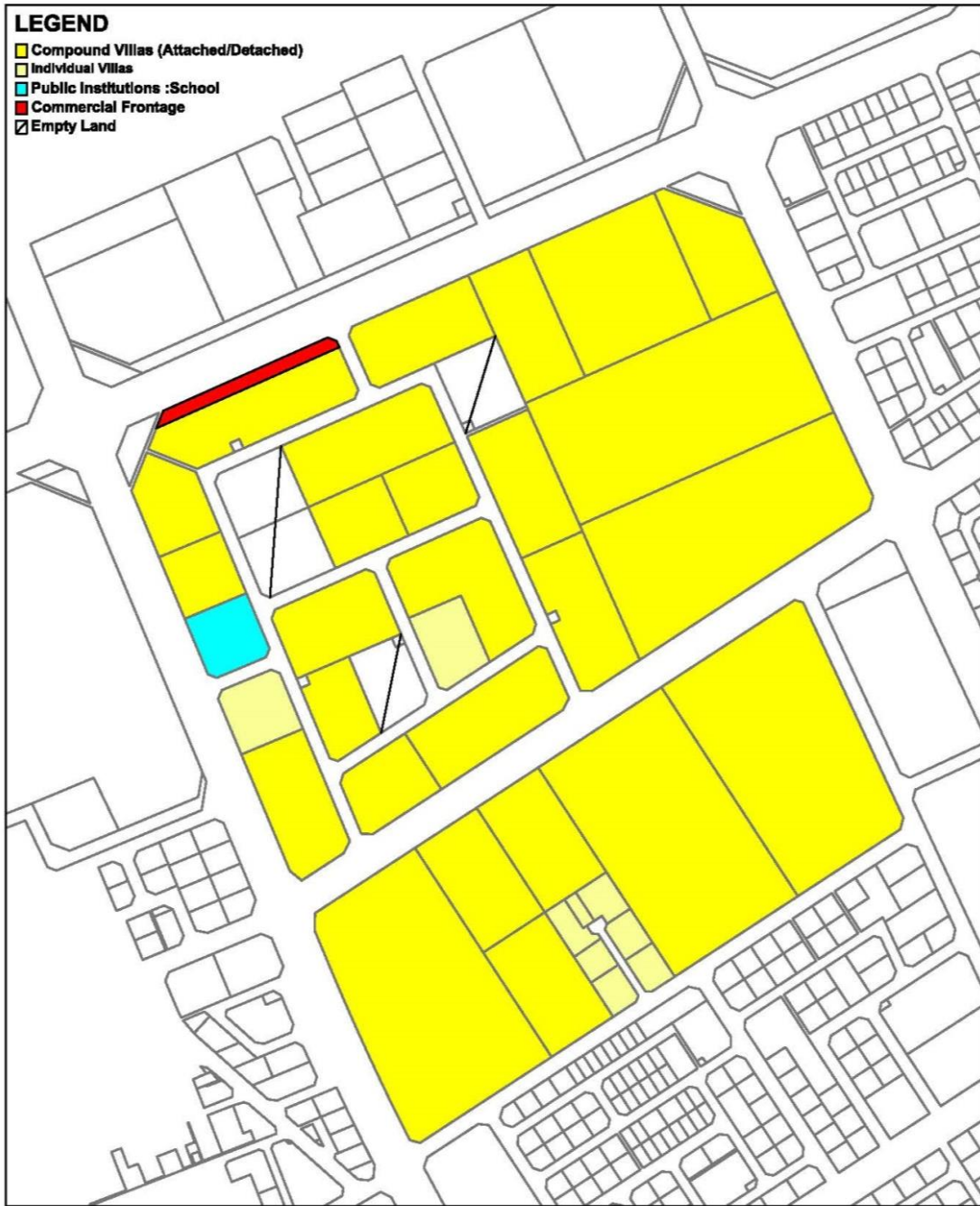


Figure 45: Detailed land use map for the study area (Source: Author)

Connectivity and accessibility

The cluster of gated developments in the study area has major consequences on the surrounding infrastructure, accessibility, and functionality of the study area, especially the extensive areas enclosed. Boundary physical barriers around developments limit access and create visual screening. The result is an exclusionary environment with large areas closed off to general public access, causing fragmentation of the urban and social fabric. These gated communities transform into isolated islands that sever the continuity of the urban fabric.

The concentration of these gated settlements has reduced connectivity and accessibility through and within major parts of the area. This reduction in permeability has the effect of increasing trip lengths for all modes of travel. Moreover, the increased travel time and mobility of pedestrians becomes excessive. The right of way is limited to key roads that surround the gated development, where the internal street network is private and inward oriented, failing to offer continuity for the external routes.



Figure 46: Walls and entrances of the gated developments in the study area (Source: Author)

Walkability

The constructed sidewalks in the study area are limited to the edges of the major streets, where they are a liner to walls and lack penetration points. These walking routes are poorly marked and make crossing the street a difficult process. The lack of signage does not provide a safe environment for pedestrians and does not facilitate their movement. These sidewalks are not connected to the internal secondary roads, and the internal secondary roads often lack sidewalks. If there are sidewalks, the walking spaces are sandy, unpaved areas between the compounds.

The pedestrian behavior of residents is affected, whether within the walls or when traveling outside their compound, due to the permeability reduction and fortification of the development. Residents must make their way to the entry points before they head toward their destination, and outsiders have to travel around the gated community as they cannot walk directly through it.



Figure 47: Map shows the right of way in the study area (Source: Author)

Social interaction and co-presence

According to the previous illustrated spatial conditions of inaccessible, isolated, single-use, and single housing types, the social interaction and co-presence have been drastically affected. Social segregation and social fabric discontinuity is taking place in these communities.

While residents of the same gated community might interact with neighbors during their use of shared and exclusive amenities, the chance to interact with other residents from neighboring blocks (i.e., non-gated communities) is almost nonexistent. There are no chances for natural interactions to occur, as the lack of public spaces leads to social separation from the poor public realm.

Moreover, the layout of the compounds with the low rise of the buildings, setbacks, inward orientation, and wide streets has decreased the shaded areas in the public realm and made it uninviting for public gathering. In addition, facilities of intense public interaction that exist outside the gated communities can be reached only by car.



Figure 48: Gated developments and the internal private/public spaces (Source: Author)

The findings of these observations are further detailed according to the status of each indicator, as shown in Table 8.

Table 7: Observations Checklist Results

Principle	Indicator	Status	Comments
Density and Diversity of Land Uses	• Mixed uses within neighborhood development (retail, commercial, housing, public facilities)	–	Limited to small commercial uses in one edge of the area plus a secondary school
	• Mixed uses within buildings (retail, commercial, apartments, public facilities)	×	No existing mixed-use buildings
	• Density of land uses within close proximity	×	Dominant single land use of residential accommodation
	• Mixed sizes of building plots	×	The building plots inside each compound are approximately identical.
	• Mixed housing types	×	Only villas, but number of floor plans could be provided
	• Mixed price levels of housing	×	Only high-income groups paying a minimum of 14,000 QR/month
	• Density of building with height alterations	×	G+1 height for the whole area with few G+1+P
	• Diversity of households from all ages, income groups, and cultures	×	Very small number of elderly as mostly rented by working contract; cultures differ but typically houses expatriate population
Connectivity and Accessibility	• Hierarchy of boulevards, streets, and alleys	–	Could exist in case the internal roads and alleys of gated communities not privatized
	• Interconnected street network to distribute traffic	×	Not considered as the gated developments block the access and increase traffic jams
	• Interconnected pedestrian network	×	Not considered
	• Interconnected bicycle lanes	–	Only on Al Waab main street
	• Interconnected and accessible public transportation	–	Karwa bus network with three stations in the study area, and the future metro line and stations are under construction
	• Well-connected public spaces	×	Scattered private “public” spaces only
	• Public amenities positioned within 5 to 10 minutes walking distance	×	Private amenities inside each compound only

Walkability	• Pedestrian-friendly, human-scaled public realm	–	Inside gated developments only
	• Car-free streets where possible	×	Not considered
	• Slow-speed roads with traffic calming methods	–	Internal streets of gated developments provide calm traffic environment
	• Small parking lots	×	Not considered
	• Buildings, stores, porches, and windows close to streets	×	Inward orientation with walled boundary
	• Marked road crossings	–	Rarely exists
Social Interaction and Co-presence	• Street-level stores and street cafes	×	Not considered
	• Choices of social activities	–	Limited to isolated social activities inside each compound
	• Everyone is welcomed to public spaces	×	Guards and barriers of compounds prevent public access
	• No kind of exclusion	×	Deliberate exclusionary infrastructure (walls, gates)
	• Human-scaled public square	×	Does not exist
	• Accessible green and parks	–	Privatized pockets of greens inside the compounds
	• Public playgrounds	–	Privatized playgrounds inside the compounds
	• Public outdoor “room”	×	No such spaces in the study area
	• Visual access to public spaces “eyes on the streets”	×	Not considered
	• Sense of place and character	–	Each compound has its unique character

5.3. Morphological Analysis

The study area was compared with the Al Asmakh neighborhood, Zone 4, centrally located in the old part of Doha downtown near the western edge of Inner Doha, less than 0.5 kilometers south of Doha Bay (Figure 49).

The Al Asmakh neighborhood has a strategic location surrounded by main key roads, namely: Wadi Msheireb Street, the A Ring Road and Al Asmakh Street. The area is considered a traditional-built environment, which represents an important stage in Doha City development.

The analysis shows major differences of urban form between the two sites. Looking at the urban morphology in both areas, one can see differences between the urban tissues. In Al Asmakh, the primary road network is tightly knitted with secondary roads that assure easy access between various points despite some dead-end street configurations. The old urban fabric of Al Alasmakh can be largely qualified as being permeable, as it is composed of narrow streets and small blocks. It was constructed on the “human scale”, where the design of narrow streets influences slower traffic flow, much like what is achieved with the traffic calming environment inside the gated development but without privatizing the spaces.

Al Waab is clearly different. Comparably, the narrow roads and small block sizes found in Al Asmakh became exceedingly large at the Al Waab site, eventually transforming into massive gated residential compounds. Inside these gated compounds, there are only private and narrow roads. The large blocks and physical barriers restrict connectivity and negatively influence the relation between different points of the site.

The site shows low penetrability and is not reflective of greater Doha vernacular urban morphology or typo-morphology. Thus, the urban form of the gated developments offers a poor image for the Doha urban fabric, clearly differentiating itself from rich traditional fabrics like Al Asmakh. Although the urban fabric of the Al Asmakh neighborhood includes some relatively new construction interventions, especially in some parts near the edges, the internal older part is composed of fine-grained urban tissue with courtyard houses which provide compact, higher-density urban fabric than the villa type used in the gated development with the wide setbacks.



Figure 49: Aerial photo of Doha traditional downtown with Al Asmakh neighborhood in the bottom left (Boussaa, 2013)

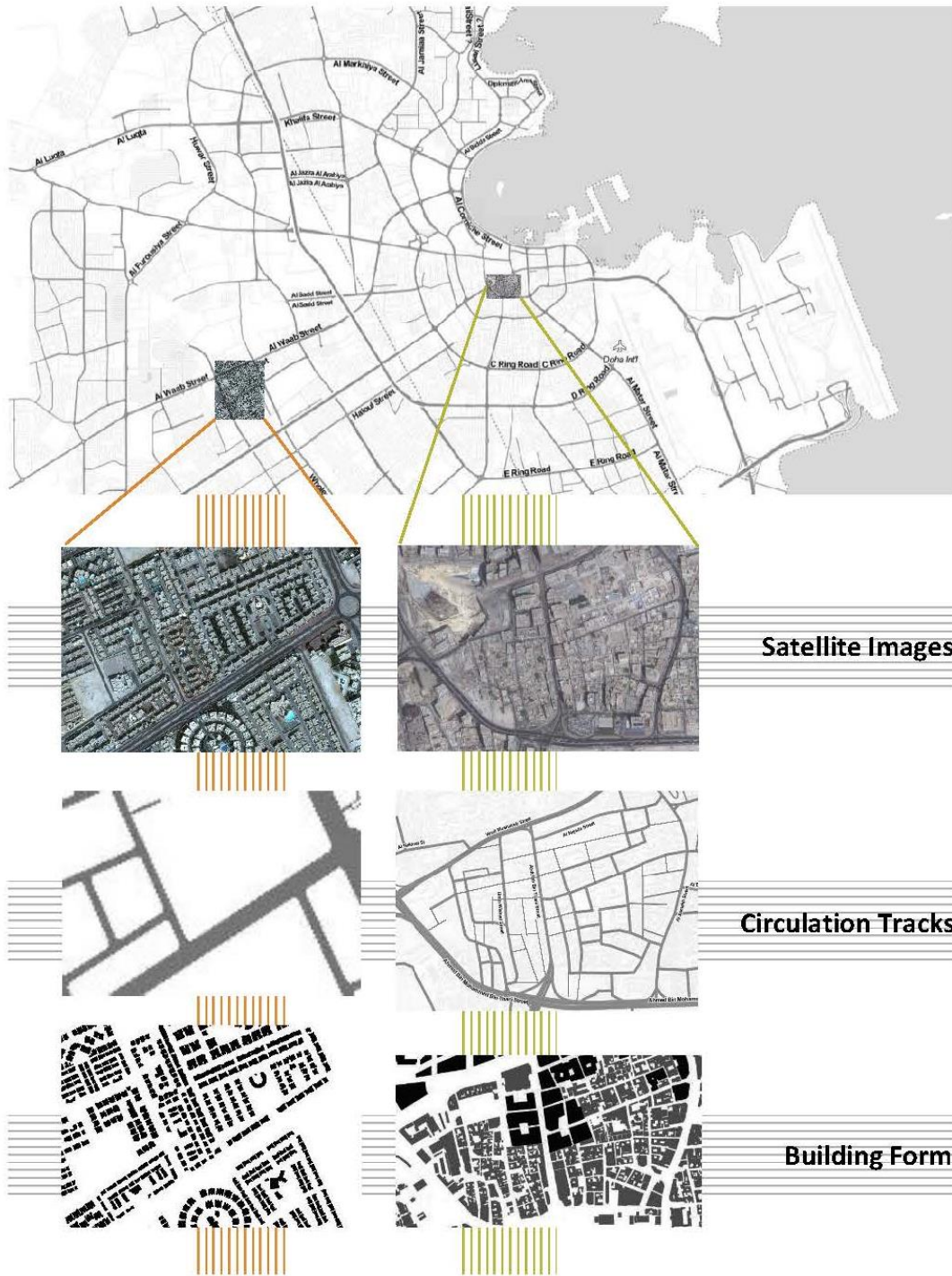


Figure 50: Morphological Analysis: The Al Waab and The Al Asmakh neighborhoods (Source: Author)

5.4. Interviews

The topics and points of discussion with the focus group of Development Institution Professionals are summarized and analyzed in Table 9.

Table 8: Information From the Interviews

Interviewee	Organization	Date and Place	Discussed Topics
E. S. Site Designer Engineer Urban Planning Department	MMUP	Sunday 23 rd August 2015, 12:00 p.m., MMUP offices, 10 th floor, West Bay	<ul style="list-style-type: none"> - Future plans for the situation of residential compounds - Existing regulations for residential compounds
A. T. Civil Engineer Development and Building Permits Department	MMUP Al Rayyan Municipality	Sunday, 25 th Oct 2015, 10:00 a.m., Al Rayyan Municipality building, 1 st floor	<ul style="list-style-type: none"> - Existing permit-granting process - Metro circulation map and stations in Al Waab area

Discussion

A number of initiatives have spots on the agenda of MMUP concerning the situation of residential compounds in Doha. The following are a few examples:

- *The possibility to sort the villas inside the residential compounds*

Thus, the owner has the ability to sell individual villas instead of having the whole compound take up an entire block.

- *Conversion of the use of existing residential villas to service activities*

This setting is restricted for villas overlooking the street, according to specific planning regulations restricting the distance between the two services, the street width, and the number of cars needed to serve each activity. The planning regulation has been set in order to provide each district with the required services (selecting from the 11 activities allowed) and to avoid generating traffic jams.

- *Conversion of existing residential complexes to a villa hotel complex in accordance with additional planning requirements and regulations*

The result would be a minimum area no less than 4 ha with maximum 25 villas in each hectare, including a main entrance street 30m in width, and a number of specific quality amenities inside the compound.

- *There is an intention to take down or reduce the height of the residential compounds' walls while maintaining security and privacy for first-row villa owners.*

This is a deliberate initiative to reduce the impact of walls on social movement and interaction, as it has been discussed in this survey that the existence of walls and their height disrupts the social fabric.

- *The above steps are being studied on a case-by-case approach; thus, the owner of the compound asks for transformation, and MMUP studies the request and offers an official agreement or disagreement.*

Each approved regulation will be optional for existing compounds and obligatory for future newly built ones.

Currently the urban planning process in MMUP is responsible for making real-time instantaneous decisions to keep pace with the increase in population, and to address the urban development's situation under temporary qualifications conducive to development until the comprehensive vision of Qatar 2032 is approved and issued.

MMUP regulation with connection to residential compound development

The city of Doha has set regulations for residential compound development. Three criteria were established based on the compound size, which is divided into three categories: 0.25 - 2.0 ha, 2.1 – 4.0 ha, and 4.1 – 12.0 ha.

Each compound size is governed by the following constraints: maximum density, permitted use, minimum building setbacks, building size and number of units, built-up area, private yard requirements, building height, parking requirements, vehicular access, and common park and amenities. (See Appendix B). Each criterion is set accordingly:

- Maximum density criteria have two limitations: (1) a maximum of 30 u/ha outside Greater Doha area, and (2) a maximum of 35 u/ha inside Greater Doha. This applies to the three compound sizes set by the regulatory body. Exceptions were made available for large developments of the third size, which permits up to 40 u/ha outside and 45 u/ha inside Greater Doha.
- Permitted use is also dependent on the compound size. However, villas and attached villas are common in all sizes. Whereas the smallest size of compounds is limited to these uses only, the second size contains (in addition to the villas) row houses and buildings with other uses (mosque, nursery, fitness and recreation facility, clubhouse, administration, and commercial). The largest size (size three) of the compound development has permitted uses of all of the previously mentioned uses plus G+1 to G+2 townhouse apartments.
- Notably, the minimum building setbacks are set similarly in all cases as per the following: from boundary 5m adjacent access road and 3m from other boundaries, front (façade-façade) 12-14m on internal roads, side (façade-façade) 6m with windows and 3m without windows, and the rear (façade-façade) is 6m.
- The building size has a fixed width for minimum 8m for all permitted housing types, while the length of the building is a maximum 50m for the

row houses and townhouse apartments. Buildings of other uses inside the compound are decided on a case-by-case basis.

The maximum number of row houses inside the second and third size compounds should not exceed 50% of villas. The total number of apartment units cannot exceed 50% of total units in the compound. The number of building units have a maximum of 18 units G+1 or a maximum 20 units G+2.

- Built-up area minimum is 150sq.m/unit for the two smaller development sizes in both outside and inside greater Doha. For larger developments of the third size, there is a differential built-up area and it varies for outside and inside Greater Doha (outside is 200sq.m/unit and inside is 150sq.m/unit). Nonresidential developments are evaluated based on their intended design and use.
- Minimum of 25sq.m for yard size is required for each unit in all of the compound sizes, with the possibility to be partially covered up by the upper level.
- Villas, attached villas, and row houses are allowed for G+1+P (penthouse) in all compound sizes. However, townhouse apartment buildings in the large compounds are allowed G+1 and G+2.
- Parking requirements are fixed in all cases, with 1.25 stalls/unit on average plus 0.15 stalls/unit for visitors.

- The number of vehicular access differs according to the size of the compound development.
 - First size is restricted to 1 main entrance with guard-house and a road of minimum 8.0m width.
 - Second size is allowed for 1 main entrance with guard-house and 1 emergency access, with a main road of 14m with sidewalks and median. Primary and local roads inside the development must have 8m width, with or without sidewalks.
 - Likewise, the third size has the same requirements of access points and hierarchy of roads with one exception for compounds greater than 8 ha, as they are required to have a minimum of two main entrances in addition to the emergency access.
- The size of common park and amenities is 5% of gross site area or 250sq.m for the small compound size, and 8% of gross site area for recreational park and minimum park size of 225msq.m. It can include one or more of the other uses mentioned earlier.
- Building coverage for compounds less than 4.0 ha is a maximum of 40% of the gross site. For compounds greater than 4.0 ha, 35% of the gross site is applicable when G+2 townhouse apartments are proposed.

- Exceptions of approval are given for what are called semi-compounds (minimum 1600sq.m area size), provided that the main frontage is not less than 36m.

The development permitting process

Upon developers' request, the design firm prepares and submits Design Concept 1 (DC1) to the corresponding municipality. This design concept will then be reviewed against the following guidelines:

- Zoning variation via Land Info System software, which will provide data pertaining to on-hold plots and future public works with the right of way.
- The file will then be forwarded for review by the Ministry of Transport (MOT), Civil Defense, and Qatar General Electricity and Water Corporation. MOT will evaluate medium and large compound developments in terms of the location of entry/exit points, the impact on surrounding traffic flow, and traffic movement within the development.
- Following that, layout and subdivision plans will be verified against the criteria of the previously mentioned residential compound development regulations.
- Upon granting approval for DC1 incorporating all areas of concern, the design firm will then submit Design Concept 2 (DC2) documents, which will also be reviewed by a number of public work authorities.
- Eventually, the permit will be issued based on the final DC2 document submittal, incorporating comments from concerned entities.

Going through the policy, it can be noticed that it mainly involves the architectural design of the buildings with minor contribution to the urban masterplan of the whole development. However, no regulations are set to determine the architecture style of the villas in a certain district or the height and design of border fences and walls, which play an important role in neighborhood character. Equally important, no regulations are set for gated development urban planning and design with connection to the surrounding context. As they are using the “one design fits all” approach, where they deal with the compound as an isolated unit with its own regulations that can be implemented anywhere, no consideration is given to the adjacent urban fabric.

5.4. Questionnaire Survey

This survey offers an insight into the gated living experience by providing an avenue of analysis for participants’ responses according to a set of identified themes as per the following. (For more details, see Appendix C)

The appeal of gated communities' living and the motivations for moving there

Table 9: Questionnaire Survey Results

Q No.	Question	Answers and proportion of responses	No. responses	Example comments
1.	Is living in a gated community appealing to you?	<ul style="list-style-type: none"> - Yes (66%) - No (7%) - It depends (28%) - Don't know 	131	
3.	What was your motivation to move into a gated community?	<ul style="list-style-type: none"> - Working contract (35%) - Safety and security (48%) - Sense of community (31%) - Lifestyle and prestige (16%) - Traffic calming environment (14%) - Other (please specify) (20%) 	131	Facilities, availability, good quality houses, no other choice, maintenance
4.	If the reason is safety and security, what does it concern?	<ul style="list-style-type: none"> - Fear of crime (15%) - Fear of non-specified "others" (13%) - Safe environment for your children to play (88%) - Other (please specify) (4%) 	92	Neighbors to help in emergency

These questions were asked to explore residents' feelings about living in gated communities and to address the motivations of residents who choose this form of housing. The findings reveal that a higher percentage show interest in living in a gated community as the idea of living in an exclusive area that is only accessible to some.

People's motivations converge with the highest percentage around safety and security followed by working contract and sense of community in a slightly lower percentage. These factors were cited as the respondents' greatest influence for choice of residence. However, when residents were asked about their concern for safety and security, a significantly high percentage indicated that having a safe environment for their children to play in was very important. This explains the lack of proper neighborhood planning where the daily activities such as the neighborhood park or the kid's playground are not in close proximity of walking distance to every residential area.

Outside the gated community, there is no hierarchy for streets, no safe streets, and no sidewalks. It is a car-dependent society, so cars are everywhere; as a result, people are not feeling safe, and they need gated communities to walk, and to have their children play safely.

Moreover, in light of the inefficiency of public housing in Doha, gated communities represent the best of city living for families in terms of facilities, housing size, and affordability in comparison with standard individual villas. Thus, at the current moment, the housing market is more likely to have people reside inside compounds, but may decline when a competitive alternative is provided in the market.

Land use, facilities, and housing types

Table 10: Questionnaire Survey Results, continued

Q No.	Question	Answers and proportion of responses	No. of responses	Example of comments
6.	What kind of local amenities do you have outside your compound within a radius of 1 km?	<ul style="list-style-type: none"> - School (38%) - Supermarket (65%) - Grocery Store (53%) - Neighborhood Park (38%) - Other (please specify) (25%) 	122	Compounds only, sports facilities, malls, petrol station, nothing
7.	In case some or all of them exist. How do you reach these amenities?	<ul style="list-style-type: none"> - By car (96%) - By bus (1%) - By bicycle (5%) - On foot (30%) - Other (please specify) (4%) 	121	Taxi
12.	What are the housing options available inside your compound?	<ul style="list-style-type: none"> - Individual villas (54%) - Attached villas (56%) - Apartment buildings (30%) - Other (please specify) (1%) 	131	
13.	Which of the following facilities is/are available inside your compound?	<ul style="list-style-type: none"> - Green area (37%) - Children playground (68%) - Clubhouse (80%) - Mosque (30%) - Swimming pool (93%) - Supermarket (37%) - Other (please specify) (24%) 	130	Gym, spa, laundry, hairdresser, sports court
14.	In your opinion, what kind of facilities are missing in your compound?	(Open-ended answers)	97	Mini market, indoor children playground, coffee shop, green area

The previous questions were posed to investigate the density and diversity of land uses in and around the compound development and how people use the associated services. The housing types and provided facilities within the compound were questioned.

For the surrounding amenities, the respondents gave approximately evenly distributed answer rates, with the highest percentage for the existing of nearby supermarket. This was expected with regard to the city's new policy that ensures the distribution of Al Meera and Al Forjan Markets inside each neighborhood. Nevertheless, the majority of residents stated that they use a car to reach the surrounding amenities.

Although neighborhood schools existed at a slightly lower rate, comments by the respondents indicated that their kids are going to another far-reaching school due to nationality and type of required school.

The dominant response for the housing types provided in each compound for villas falls into two types of attached and detached, whereas apartment buildings had a much lower rate.

Inside the compound development, facilities reported by respondents were mainly swimming pool, clubhouse, and children's playgrounds with lower rates for green area, supermarket, and mosque. This explains the focus of developers on providing a lifestyle to attract people and accommodate the needs of the expatriate community. However, numbers of comments from the

respondents indicate the insufficient maintenance and poor cleaning condition of the pool and other facilities led to the resident(s) preferring not to use them.

Walkability and accessibility

Table 11: Questionnaire Survey Results, continued

Q No	Question	Answers and proportion of responses	No. of responses	Example of comments
5.	How do you reach the city?	- By car (100%) - By bus (1%) - By bicycle (0%) - On foot (2%) - Other (please specify) (2%)	130	Taxi
8.	Do the walls and gates of your gated compound affect your connectivity with the surroundings?	- Yes (31%) - No (59%) - Don't know (11%)	128	
9.	Do you find it difficult to walk to a neighboring block?	- Yes (36%) - No (47%) - Don't walk (17%) # If yes, why? Pl. mention:	131	Because of the walls and gates, no proper pavement or footpath, long distance to walk
19.	What are the security measures provided at the compound main entrance? Tick all applicable.	- Guards (91%) - CCTV (51%) - Gates (77%) - Barriers (54%) - Other (please specify) (6%)	129	Razor wire on the walls, police
20	When do gates or barriers open?	- Upon entrance only (72%) - During the whole day (9%) - Day and night (20%)	128	
21.	In case there are guards on the main entrance. Who is allowed to	- Residents only (2%) - Residents and their guests (86%) - Open to public (12%)	126	

	enter the compound?			
22.	What are visitors required to provide upon entry?	- ID (68%) - Name and/or number of the resident's place (56%) - Nothing (21%) - Other (please specify) (1%)	131	Residents enter through card or face recognition

Walkability and accessibility were explored at three levels: the city level, the contextual neighborhood, and the gated development. This section of the survey also examines the effect of the physical presence of gated boundary and security measures on the residents' and non-residents' travel behavior for either pedestrian or vehicular movement.

Responses show that overwhelming percentages (100% of respondents) reach the city only by car. Similar rates were given to the impact of the walls and gates on the connectivity with the surrounding area and the ability to walk to a neighboring block. Comments on the difficulty of walking included: the lack of footpath, no proper pavement, no place to walk to, long distance for walking, and speeding cars that make it unsafe to cross the street.

In the question about how the residents reach the outside facilities, a high rate of 96% responded that they use their car. Yet, the non-residents' (public's) accessibility was addressed through three questions about the security measures provided at the main entrances. A large set of respondents reported having guards at the main entrance of their compound in addition to gates or

barriers that open upon one's entrance only. Respondents claimed in a high percentage that only residents and their guests are allowed to enter the compound.

Residents usually enter by providing a card placed on the car windshield or through face recognition by the guards. Guests are subject to ID control and/or providing the the resident's address. These results show that the physical gating and the security measures negatively impact the walkability and accessibility for both residents and non-residents of gated developments, which limit the livability factor inside the neighborhoods and enhance spatial segregation.

Social interaction and sense of community

Table 12: Questionnaire Survey Results, continued

Q No	Question	Answers and proportion of responses	No. of responses	Example of comments
10.	Do you consider the streets outside your gated community as vital streets? (In terms of human street level Interaction)	- Yes (21%) - Sometimes (21%) - No (45%) - Don't know (14%)	131	
11.	Do you interact with people living in your surrounding area outside your compound who can be reached within walking distance?	- Yes (18%) - No (82%)	131	
15.	Do you interact with people living inside your compound?	- Yes (84%) - No (16%)	131	
16.	If yes, where do you usually meet?	- House visit (62%) - Street or main entrance (59%) - Clubhouse (31%) - Mosque (12%) - Other (please specify) (22%)	112	Swimming pool, playground
17.	What is your perceived sense of community and identity within your compound?	- Non-existent (15%) - Not strong (37%) - Somewhat strong(33%) - Strong (12%) - Very strong (3%)	130	
18.	What do you feel your compound lacks in terms of community identity?	- Community activities (68%) - Public spaces (35%) - Non-resident interaction (24%) - Safety (6%) - Other (please specify) (6%)	118	Multi-cultural interaction, better compound management

The previously listed questions were asked in order to investigate the level of street vitality and social interaction. Also, they measure the perceived sense of community for the residents of one compound.

Regarding the respondents' community interaction, residents reported a high percentage (84%) for their interaction with other residents living inside the same compound. The most common way of interacting was house visits, followed by a slightly lower percentage for the outdoor space of internal streets and main entrances as places of social interaction.

A significantly lower percentage of respondents interacted with non-residents of the compound within the same neighborhood. The mean response of overall perceived sense of community is not strong with a slightly lower rate for community being somewhat strong. The reasons described were the lack of community activities, public spaces, and non-resident interaction. However, providing a shared public realm is the most important factor to establish community and allow activity to occur and invite diverse groups of people to interact.

Level of satisfaction and willingness to live in a non-gated community

Table 13: Questionnaire Survey Results, continued

Q No	Question	Answers and proportion of responses	No. of responses	Example of comments
23.	How do you rate your satisfaction with your gated community?	<ul style="list-style-type: none"> - Very satisfied (16%) - Satisfied (46%) - Medium (28%) - Unsatisfied (8%) - Very unsatisfied (2%) 	130	
24.	If satisfied, what is the reason behind your satisfaction?	<ul style="list-style-type: none"> - Appearance and quality of housing (62%) - Security (57%) - Availability of parking spaces (52%) - Facilities (51%) - Fellow residents (33%) - Other (please specify) (12%) 	103	Independence, Service, Rent is reasonable, Convenience
25.	If unsatisfied, please mention the reason behind your dissatisfaction.	(Open-ended answer)	26	No sense of community, parking spaces are limited, poor compound management, too much security for guests, no green area
26.	Would you live in a non-gated community in the future?	<ul style="list-style-type: none"> - Yes (25%) - No (24%) - Whatever is available (31%) - Don't know (20%) <p># If yes, why? Please mention</p>	131	Searching for good community, It is safe to live anywhere in Doha

In order to learn from the success factors of gated communities, the level of satisfaction was addressed in three questions. Higher percentages of 46% for satisfied and 28% for medium satisfaction were conveyed respectively. The results show a generally even distribution of reasons behind residents' satisfaction, with the higher rate for the appearance and quality of housing followed by a slightly lower rate for security, availability of parking spaces, and facilities.

Conversely, a small set of unsatisfied respondents declared their dissatisfaction due to the absence of community sense and social life, the lack of green areas, the poor compound management, and the excessive security measures for the residents' guests.

The nature of gated community demographics in terms of cultural background, age, and household structure

Table 14: Questionnaire Survey Results, continued

Q No	Question	Answers and proportion of responses	No. of responses	Example of comments
27.	Nationality	- Qatari 1% - Arab 32% - European 30% - American 15% - Asian 12% - Other (please specify) 8%	130	Australian Canadian Pakistani African
28.	Marital status	- Single 5% - Married 32% - Married with college-age children 4% - Married with school kids 60%	130	
29.	How many people currently live in your house	- 1-2 people 11% - 3-4 people 58% - 5-6 people 30% - 7-8 people 2%	130	
30.	Gender	- Male 30% - Female 70%	129	
31.	Age	- 15-24 2% - 25-34 38% - 35-44 44% - 45-59 14% - 60 and above 2%	130	

For general respondents' characteristics, the main demographics are composed of expatriate populations, with the highest percentage for Arab and European followed by the American population with a lower rate. Only 1% of

the respondents were Qataris, as they usually prefer to live in individual villas rather than compounds.

The largest group of respondents are married with a high percentage for families with school kids. Only 5% of respondents were single. A household size of 3 to 4 people was the highest group reported by the respondents, with a lower rate for 5 to 6 people living inside one house.

The communities have residents of ages 35-44 as the largest group followed by a slightly lower rate for groups of 25-34. This is due to the large working group of expatriates in the city of Doha who are mostly residing in compound developments through their working contracts. Younger groups of single or newly married would prefer smaller size apartment living which is available in apartment buildings and residential towers.

5.5. Conclusion

This chapter has presented the analysis done on the data collected for the study area. The case study analysis was an exploration of how physical gating affects the livability within a neighborhood development. It also provides insight into the condition of gated developments in the whole city of Doha especially that the survey included some responses from people residing in compounds outside the case study area.

The results of the analysis offer grounds for a conclusion that the challenges of the Al Waab to provide for urban and social livability are due to the lack of

density and diversity of land uses, limited accessibility and connectivity, and absence of social interaction of diverse groups. Based on these findings, recommendations will be put forward in the following chapter in an effort to limit the negative impacts of physical gating and to integrate the gated development within the surrounding urban context. This can be achieved through the employment of the adapted livability principles with reference to the best practices of gated development policies in order to structure an urban pattern that would increase the neighborhood livability.

The research recommendation will take into consideration future visions for Doha city set in the QNDF 2032, which aims to restructure the city into a “compact, polycentric city with opportunities for mixed-use establishments so that urban developments would include elements to service all aspects of one’s existence in urban space” (QNDF, 2014).

CHAPTER SIX: CONCLUSIONS ON ANALYSIS AND RECOMMENDATIONS

The following chapter offers a conclusion to the study and answers the research question and hypothesis set at the beginning of the study. It also presents a recommendation for enhancement of the livability of gated communities in the Al Waab neighborhood and finally closes with remarks about future research directions with regards to the emerging urbanization patterns in Doha.

6.1. Answers to Research Questions Based on Analytical Conclusions

From the research methods, informative results have emerged supporting a number of the research hypotheses and have refuted others.

- *How do gated communities affect neighborhood livability?*

After conducting the literature review, this question was divided into four sub-questions that address specifically each of the identified and adopted neighborhood livability principles as per the following:

- *What is the impact of gated communities on the density and diversity of land uses within the neighborhood?*

The results show that the gated communities provide a dominant residential land use with minimum private amenities provided for the residents only. The large area size of such developments result in a remarkably low density of land uses around them that

are hardly located within walking distance from the residential units. The cluster of gated communities in the study area presented a major negative impact on the distribution of services including open spaces and neighborhood parks.

- *Does the presence of gated communities affect the connectivity of street networks and the accessibility to public spaces?*

The results clarified the segregated nature of the gated communities that caused an isolated functional spatialization that negatively affects the permeability and connectivity in the adjacent areas. The physical presence of the perimeter compounds' walls impedes the connectivity of street networks and interrupts the continuity of pedestrian paths. This decrease in connectivity results in an increased trip length for the different modes of transportation. The security measures located at the main entrances of gated developments block the public accessibility, as only residents and their guests are allowed to enter the private realm that exists behind the gates.

- *Do gated communities encourage walkability?*

The findings indicate that residents of gated communities in Doha reach the city and the surrounding facilities mainly by car. Even

though it shows that walkability is not affected by the presence of the walls and gates but rather because of the improper design of the public realm, the absence of sidewalks and pavements decreased connectivity within the neighborhoods.

However, the inward orientation of gated developments with the solid blank interface of perimeter walls leaves deserted streets in the surroundings, walled from both sides with minimum openings limited to the secured entrances only. Moreover, open spaces are privatized inside the gated development.

Thus, the public realm becomes limited to vehicular streets that do not invite pedestrians and give a sense of unease, as majority of people reported the surrounding streets as not vital in terms of human level interaction.

- *Do gated communities promote social interaction and co-presence of diverse groups?*

Gated developments' layouts exhibit very low potential for creating interface conditions between people moving on the street and compound residents, indicating lack of possibility for social exchange between gated compound residents and streetwalkers (if streetwalkers exist).

This lack is due to physical presence of perimeter walls, inward housing orientation, and the absence of public spaces that endanger social interaction and co-presence. Moreover, the results indicate that residents of gated communities usually interact with other fellow residents living inside the same compound, but rarely interact with non-residents living in their surroundings. Although, the residents reported their perceived sense of community as not strong and lacking community activities, public spaces, and non-resident interaction.

Gated communities do not promote social interaction and co-presence of diverse groups also because they do not provide a mix of housing types, sizes, or rent levels.

- *How do the gated communities' neighborhood of the Al Waab compare in a morphological analysis with other traditional more organic neighborhood within the city of Doha?*

The morphological analysis of Al Waab neighborhood and the traditional neighborhood of Al Asmakh in the core of the city shows major differences in urban form between the two sites. The central zone of Al Asmakh neighborhood retains grid intensity with fine grained, compact, well-connected urban fabric. In contrast, the recent planning of Al Waab study area offers regular, largely spaced, disconnected grid patterns, which seem incapable of structuring a livable neighborhood locality.

Thus, major morphological differences have been identified in the plot sizes, building density, type of blocks, and quality of connections and accessibility. The Al Waab study area exhibits large plot sizes for gated development with internal low building density; the large grid divisions translate to very low accessibility potential for pedestrians, as well as a poor distribution of land use. Further, the circulation track layout, which represents the public right of way in the study area, coupled with the privatization of large areas, contrasts with the more densely interconnected grid of the Al Asmakh neighborhood.

- *What is residents' motivation behind choosing to live in a gated community?*

The findings indicate that people in Doha are primarily motivated to move to gated communities for security reasons, as part of their working contract, and the package of dwelling and facilities. However, the security factor is defined as the primary reason for moving, alongside other exclusionary benefits such as reduced traffic and increased road safety, and thus suitability of the development for kids.

Fear of crime was an uncommon factor for residents to live in a gated community. This is related to the high safety standards that are prevalent in the state of Qatar. Thus, the gated community in Doha is more sought-

after because of the insufficient planning of public housing and the inadequate provision of facilities and public spaces.

Based on the above findings as related to the gated communities' livability deficiencies, and in context of the increased popularity and proliferation of such communities, gated developments in their existing form should be discouraged, as they have negative impacts on the neighborhood livability.

However, if they must be allowed in any way, then they should be controlled to ensure—when permitted—that they conform to acceptable standards and that potential adverse impacts are minimized or mitigated. Therefore, following are the research recommendations with reference to the adapted livability principles and best practices of policy and planning responses.

6.2. Recommendations for Improvement of the Livability of Gated Communities

It has been shown that the study area lacks a number of neighborhood livability principles identified as important in this research, which are the foundation for neighborhood livability. In order to mitigate their negative impacts and better adapt the gated communities into the urban fabric, recommendations will be given to make sure that they are more livable and better integrated into the city.

The recommendations will take into account the best practices of policies and the adapted livability principles described in the third chapter, to give solutions that address most adequately the livability disadvantages of the area.

The hypothetical proposal for the study area is a two-phase approach that responds to the research problem. The first phase comprises minor interventions that could be done in the near future. The second phase includes major interventions that could be applied later depending on economic feasibility.

The first phase mainly considers pedestrian connections and takes into consideration any existing developments, only proposing intervention on vacant plots locating public facilities to give the possibility for neighborhood residents to reach them on foot.

Figure 51 sketches out a conceptual urban design proposal that intends to provide pedestrian walkways to reach the public facilities, which are suggested on the vacant lots. The walkways will form a green network, planted with trees to provide shading and become more pedestrian-friendly.

To ensure the continuity of the pedestrian access through the gated developments, the number of access points should be increased and well-located to ensure direct and easy access. Thus, regulations should be appointed to guarantee public access to open space inside the development.

However, public access to the compound open space does not give a right to use residents' recreational amenities. Private use of recreational amenities could be preserved by the use of a pin code or a swipe card with lockable gates, which could be unlocked only by residents.

The proposed facilities in the vacant lots refer to the guidelines of QNDF regarding local area centers that should provide daily and weekly needs to new and existing communities in the district and local center scales based on a specific walking diameter of 250m-400m. These facilities include a district park, local park, school, mosque, supermarket and other retail, healthcare facilities, and community facilities.

Figure 52 illustrates the proposed distribution and locations of the facilities on the vacant lots, where Land Number 1 is proposed to be a mixed-use development of four-story residential buildings with a mix of shops, offices, and health services on the ground level. Land Number 2 is proposed to have community facilities such as recreational facilities, a community center, and kindergarten. Land Number 3 is allocated for a mosque. Land Number 4 is proposed to be a district park and Land Number 5 would become a small local park with kids' playground.

All of the proposed facilities should be supplemented with an adequate number of ground-level small parking lots to serve the new uses, but large underground parking is encouraged to better optimize the ground floor area and preserve open, green spaces to provide a quality, pedestrian-friendly public realm.

A number of the existing villas overlooking the newly proposed facilities are converted to other small retail buildings, catering activities or street cafés where enough parking spaces are provided across the street.

Connectivity to the nearby future transit station and existing bus stops is ensured through the continuity of pedestrian paths and by increasing the number of street-marked crossings, especially on Sport City Street. It is also recommend to have either a pedestrian-controlled signal to allow for foot traffic between communities on one side of the road and the future transit station on the other side; alternatively, a proposed pedestrian bridge or an underground pedestrian tunnel crossing the street.

The first phase should include adjustments to the boundary walls to ensure visual permeability to public areas inside the compounds in order to limit the negative effect that results from the continuity of high solid walls facing onto the adjacent streets of the public realm. The perimeter wall or fence should be visually permeable where possible to maintain the visual integration and give a sense of safety for the surrounding public realm.

An immediate option will be to implement a shade requirement along the boundary walls, which will be an easy and quick concept to introduce a shade system that will enable residents' use of the space provided near boundary walls throughout the day and enhance the pedestrian experience. Another approach, which can be applied as a first step intervention for the boundary walls, is to make them green walls (hedges) especially when they overlook private areas inside the compound.

Figure 54 shows an example of the proposed green boundary wall, which is followed by a proper sidewalk maintained on both sides of the street and provided with tall landscape for shading. Cycling lanes are proposed on one side of the street and a linear parking lane on the other side. In addition, the figure illustrates the villas with converted uses to have porches and direct entrances from the sidewalk with no boundary walls in order to activate the public realm and enhance the accessibility.



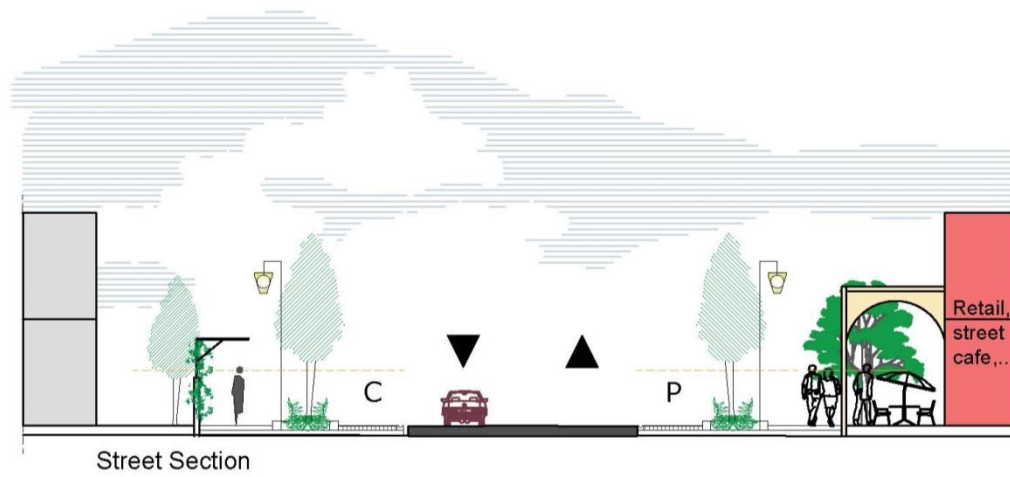
Figure 51: Plan showing the first phase recommended interventions in the study area. (Source: Author)



Figure 52: Site plan for the first phase of the proposal. (Source: Author)



Figure 53: Map showing the possible connections between the study area and its surrounding. (Source: Author)



Phase 1

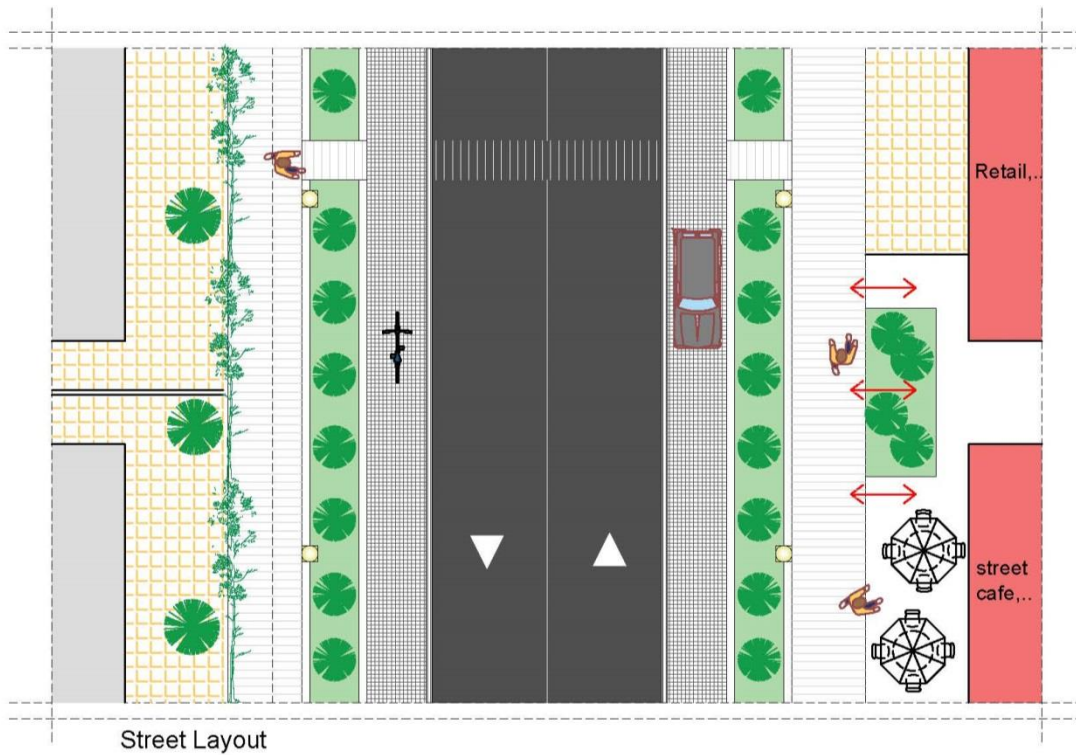


Figure 54: Street section and layout for the first stage proposal. (Source: Author)

The second phase proposes more serious interventions inside the study area (Figure 55). It does not call for a complete alternative of gated living, rather it shows ways to limit the negative impacts of gated communities when planned, and make them more integrated within the surrounding urban fabric. It also takes into account the principles of livable neighborhoods for density and diversity of land uses, connectivity and accessibility, walkability, and social interaction and co-presence.

In addition, the research findings with regard to people's preferred features of gated communities which highlight that neighborhood's design should provide security, privacy, sufficient traffic management, and desirable local amenities. Certainly, the kid-friendly environment and recreational facilities were highlighted as desirable factors by residents of the case study area, and this may indicate a need for the provision of traffic calming measures, safe sidewalks, and crossings and additional recreational facilities within neighborhoods.

The urban design of the neighborhood should include places, spaces, and communities that encourage social interaction and cohesion. Efforts should be put on the public establishment of facilities, infrastructure, and services in order to reinstate confidence in the public realm.

Building on this, the second phase proposal advocates smaller circulation tracks and block sizes for the area, based on considerations for pedestrian and

vehicular movement and accessibility. The smaller grid of the proposed scheme allows for an increase in building density and street frontage and allows for greater accessibility and pedestrian circulation opportunities.

Plots parallel to the Al Waab main street should be designed as low- to mid-rise, mixed-use buildings arranged in clusters with mainly residential use, interspersed with offices and ground level commercial and catering activities to service the residents and create a street interface. This will form a natural edge to the neighborhood beside the major roads instead of the enclosed blank edges of the gated development.

The large-scale gated development should be broken down into smaller plots allocated in the inner part of the area in the middle of the mixed use developments, thus limiting their impact on the surroundings and increasing the connectivity.

Individual villa plots are maintained with a proposal to expand their area in order to have a diverse urban forms where different groups of people live in proximity to each other.

A major green boulevard connecting the two sides of the area is also proposed. Along the boulevard, mixed-use buildings can be interspersed with gated communities in order to create a diverse building environment and avoid having gated developments adjacent to each other.

The vacant lots will continue to have the same proposed uses as in the first stage, trying to give the neighborhood a visible center with a small public square. This would provide a number of common green areas with playgrounds distributed within the neighborhood that are inviting for people to meet and interact.

Residents will have a variety of transportation choices including walking, cycling, taking public transportation, or driving. Public transportation is provided through the available bus stops and the proposed future metro station, where a bus route will be assigned to service the adjacent neighborhood.

The street section and layout in Figure 56 presents recommendations for improvement of interface and street condition along gated developments' in-between routes. These recommendations, coupled with the spatial advantages of the proposed smaller scale grid, give a more integrated platform of opportunities for neighborhood livability to generate. The figure shows having a front-loaded area with mixed buildings on one side of the street. The new development includes underground parking, a ground level retail commercial building, and residential apartments.



Figure 55: Site plan for the second stage proposal. (Source: Author)

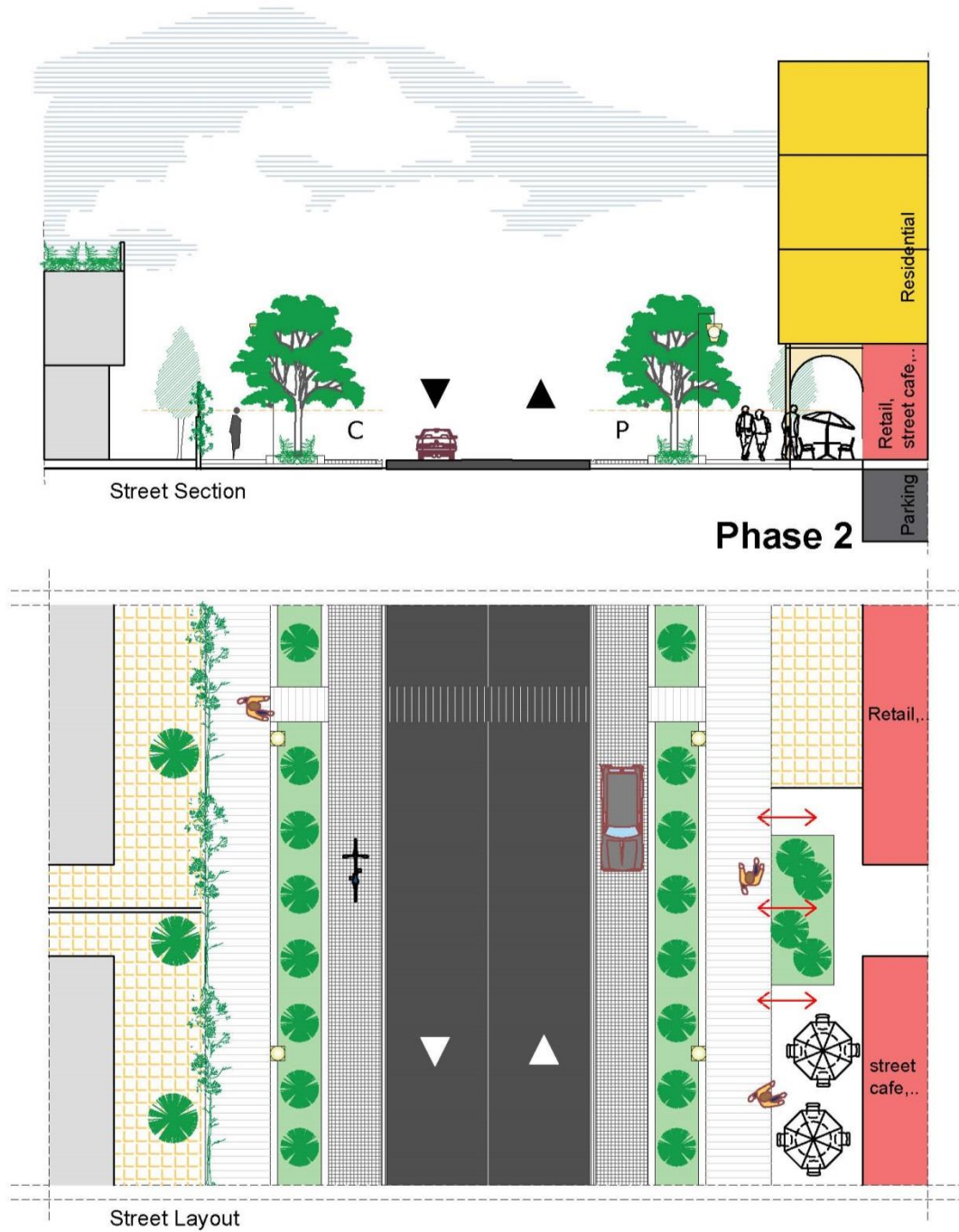


Figure 56: Street section and layout for the second stage proposal. (Source: Author)

After viewing the two-stage recommended proposal for the study area, a general deduced approach to dealing with other similar situations of gated community planning in the city is offered through the following recommendations.

- The cluster of gated developments should be avoided in order to prevent a concentration of enclosing walls without through access. Instead, small, individual gated communities should be located and distributed among other higher density built forms of development.

The small subdivisions of land will allow for gated development and other diverse land uses to locate near each other, which will enhance walkability and vitality of the urban area. For example, small gated projects can be embedded within conventional residential fabric; this will limit their impact on permeability and provide a mix of housing types and sizes and consequently ensure the diversity of social groups.

The small size of gated developments will also limit the number of amenities provided inside the compound. Thus, residents will depend on local public facilities provided outside their developments, which will enhance social interaction between the neighborhood residents.

- The “canyon effect” created by the compound’s walls on both sides of a public street should be avoided. This can be achieved through the design adjustments of the boundary walls so they allow lines of sight in

and out of the development, using transparent materials and lower height.

Another method is to make sure that the gated interface facilitates positive identity and character to the neighborhood as a place of interaction by having intermediate openings within the enclosed parameter.

Breaking up the enclosed edge into pockets of open space improves the main road interface and enhances the interaction between the city and such developments. This can be achieved also by facing a number of the houses outwards onto the adjacent boundary street and having windows and porches that look over public roads.

Diverse activities are encouraged to take place in these buildings such as local stores, street cafés, or other retail uses. Thus, the chances for direct relations and human interaction are maximized, by applying the idea of “eyes on the street” to increase the safety of the public realm and raise the interaction between gated communities and the surrounding urban environment.

- The layout of the residential compound should be integrated within the surrounding context. Street networks and pedestrian links should be maintained wherever possible to maximize connectivity and accessibility in the area.

The main internal streets of the gated community should be an extension of the external roads and allow for public access. All the facilities provided inside the compound can be located on this main road to create a vibrant public realm, while privacy can be protected for other secondary internal streets.

This idea is similar to the condition found in the old traditional Islamic neighborhood where the market is located on what is considered to be the public space of the neighborhood, yet the pattern of cul-de-sac routes gives a sense of territory and privacy within the more private residential quarters. Thus, the hierarchy of streets plays a significant role in designing the privacy of the neighborhood spaces.

- The public sector should ensure the provision of well-connected public places and facilities such as public parks, squares, accessible green, and public amenities to increase the quality of life in the neighborhood where everyone is welcomed without any kind of exclusion.
- Well-distributed traffic and street hierarchies should also be of concern to the public sector, as they are important for slow speed roads with traffic calming methods and regular pedestrian crossing. This will result in a pedestrian-friendly, human-scaled public realm that competes with the gated development and consequently attracts people out of their enclaves to enjoy livability and social interaction. Subsequently, the gated living will be replaced with alternative, more viable living.

Based on the research findings, this approach ensures that gated communities, when planned, are more livable and better integrated with the surrounding urban fabric and the city.

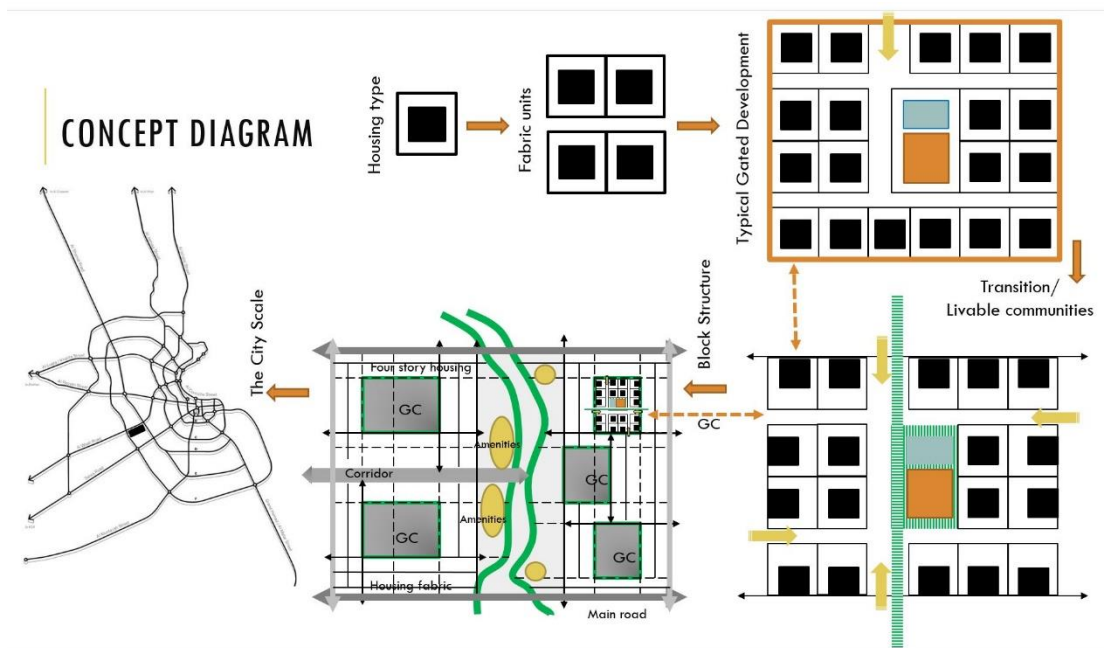


Figure 57: Concept diagram for the transition from gated community to a more livable one.

(Source: Author)

6.3. Conclusion

The recommendations for the enhancement of the gated communities in the Al Waab study area aim to address the challenge in creating a livable neighborhood that contains gated developments.

The current livability deficiencies in the study area are addressed through a two-phase proposal. The first phase comprises minor interventions that could be applied instantly to the existing situation without requiring any large demolition. The interventions are mainly about pedestrian connections and access through the gated communities, proposing public land uses on the vacant lands, and enhancing the streetscape design by providing proper sidewalks, landscaping, and shading elements. Adjustments to the compounds' boundary walls are proposed as well.

The second phase involves major interventions that could be applied later, when large demolition is more feasible. A smaller subdivision of land is proposed as the small spatial grid reinforces the through movement potential in the area, increases the permeability and could efficiently guide developments towards a mixed-use and accessible urban form.

Additional recommendations address the existing absence of interface settings between the compounds' perimeter walls and streets. Diversity of ground level uses coupled with an increased density are proposed as the fundamental

modifications in the study area. The recommended redevelopment illustrates the effects of the small grid on integrating the local structure.

The proposal is effective in defining neighborhood livability and enhancing upon the integration of gated communities with the surrounding urban fabric. The small land subdivisions knit the spatial grid into a constant, more permeable circulation network.

The social viability factor has been addressed through accessibility and movement potentials, adequate public spaces provisions, and morphological permeability that would give a chance for dynamic movement that consequently leads to social interaction and co-presence.

Later, the recommended proposals for the study area would extend to a generalized approach that could be applied on similar situations at the city level. Thus, the embeddedness of the proposed scheme will help to define a neighborhood structure where the negative impacts of gated communities are minimized and neighborhood livability is maximized. As a result, a group of livable neighborhoods will cumulatively to form a livable city.

6.4. Limitations of the Proposal and Recommendations for Future Study

The recommendations of this research are limited to the enhancement of the livability conditions of gated communities and how to make them more integrated with the surrounding urban fabric. The recommendations of the AI

Waab study area are based on available data and current situation and do not consider specifics of master plans for the area, if any.

Thus, the proposal is a conceptual input to the current discussion of how to plan and structure the neighborhood and gated communities within in order to achieve livability that addresses functional and social needs. Furthermore, it is a response specifically to the requirements of a competing global city that seeks urban livability mechanisms that increase social interaction and face-to-face contact, which are the grounds for a more livable neighborhood.

Therefore, more than a precise urban design solution, it is a scheme for constructing livable neighborhoods that would give the city of Doha its distinct spatial and social integration towards achieving its global vision.

Given the description and character of the gated communities and the visions raised in QNV 2030, it is important for municipal planning authorities to develop a comprehensive framework that controls the development of such communities. A framework that addresses how to make the transition of gated developments to become more livable is necessary to achieve the city vision.

Additionally, the proposal indicated in this study could possibly pave the way to reevaluate the gated communities' development and ultimately lead to creative solutions for existing gated communities where more serious interventions should be addressed in future studies to consequently propose alternatives for gated development.

Therefore, for future studies, it is essential to conduct a wider range survey in order for a much deeper understanding of the reason behind people's motivation for choosing to live in a gated community. Thus, planners can address the issues and provide viable alternatives with improved residential environments provided to the wider community.

Growing literature around the concept of gated communities is taking place in recent research studies. Samer Bageen and Ola Uduku in their book *Beyond Gated Communities* seek to contribute to the ongoing discourse on urban gated communities and their continuing role in the urban fabric of cities across the globe. They are taking a new approach to think beyond our usual conceptualization of urban gated communities, to a wider examination of the term "gating" with an analysis more grounded in contemporary issues.

To do so, they think about space-gating that goes well beyond the facilities of today's gated communities by focusing on a far broader range of instances that constitute exclusion and inclusion in urban spaces within the globalized economies we engage with today (Bageen & Uduku, 2015).

The contemporary conditions in which communities are conceptually gated as they relate to those actually gated urban contexts where they exist reveal the possibilities for a new direction for future research in Qatar.

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Appendix A: Questionnaire Survey Form

Gated Communities and Neighborhood Livability in Doha

Gated Living

I invite you to participate in my research study. The purpose of the study is to evaluate the livability of gated developments. This study involves people whose residing in compounds. It should not take more than 5 minuets of your time.

The information collected will be kept strictly confidential. Your participation is completely voluntary and anonymous. You may withdraw from this study at any time. If you have any questions you may contact Ayla at aa1200713@qu.edu.qa.

Please indicate that you have read, understood and agree to participate in this survey.

If agreed, please proceed with the Survey:

1. Is living in a gated community appealing to you?

- Yes
 No
 It depends
 Don't know

2. Where do you live? (compound name)

3. What was your motivation to move into a gated community?

- Working contract
 Safety and security
 Sense of community
 Lifestyle & prestige
 Traffic calming environment
 Other (please specify)

4. If the reason is safety and security, what does it concern?

- Fear of crime
- Fear of non-specified "others"
- Safe environment for your children to play
- Other (please specify)

5. How do you reach the city?

- By car
- By bus
- By bicycle
- On foot
- Other (please specify)

6. What kind of local amenities do you have outside your compound within a radius of 1 km?

- School
- Super Market
- Grocery Store
- Neighborhood Park
- Other (please specify)

7. In case some or all of them exist. How do you reach these amenities?

- By car
- By bus
- By bicycle
- On foot
- Other (please specify)

8. Does the walls and gates of your gated compound affect your connectivity with the surrounding?

- Yes
- No
- Don't know

9. Do you find it difficult to walk to a neighboring block?

- Yes
- No
- Don't walk

If yes, why? Pl. mention:

10. Do you consider the streets outside your gated community as vital streets? In terms of human street-level interaction

- Yes
- Sometimes
- No
- Don't know

11. Do you interact with people living in your surrounding area outside your compound who can be reached within a walking distance?

- Yes
- No

12. What are the housing options available inside your compound?

- Individual villas
- Attached villas
- Apartment buildings
- Other (please specify)

13. Which of the following facilities is/are available inside your compound?

- Green area
- Children playground
- Club house
- Mosque
- Swimming pool
- Super Market
- Other (please specify)

14. In your opinion, what kind of facilities are missing in your compound?

15. Do you interact with people living inside your compound?

- Yes
- No

16. If yes, where do you usually meet?

- House visit
- Street or main entrance
- Club house
- Mosque
- Other (please specify)

17. What is your perceived sense of community and identity within your compound?

- Non-existent
- Not strong
- Somewhat strong
- Strong
- Very strong

18. What do you feel your compound lacks in community identity?

- Community activities
- Public Spaces
- Non-resident interaction
- Safety
- Other (please specify)

19. What are the security measures provided at the compound main entrance? Tick all applicable:

- Guards
- CCTV
- Gates
- Barriers
- Other (please specify)

20. When do gates or barriers open?

- Upon once entrance only
- During the whole day
- Day & night

21. In case there are guards on the main entrance. Who is allowed to enter the compound?

- Residents only
- Residents and their guests
- Open to public

22. What do visitors required to provide upon entry?

- ID
- Name and/or number of the resident's place
- Nothing
- Other (please specify)

23. How do you rate your satisfaction of your gated community?

- Very satisfied
- Satisfied
- Medium
- Unsatisfied
- Very unsatisfied

24. If satisfied, what is the reason behind your satisfaction?

- Appearance & quality of housing
- Security
- Availability of parking spaces
- Facilities
- Fellow residents
- Other (please specify)

25. If unsatisfied, please mention the reason behind your dissatisfaction:

26. **Would you live in a non-gated community in the future?**

- Yes
- No
- Whatever is available
- Don't know

If yes, why? Please mention

Gated Communities and Neighborhood Livability in Doha

About the interviewee

27. Nationality?

- Qatari
- Arab
- European
- American
- Asian
- Other (please specify)

28. Marital status?

- Single
- Married
- Married with collage going children
- Married with school kids

29. How many people currently live in your house?

- 1-2 people
- 3-4 people
- 5-6 people
- 7-8 people

30. Gender?

- Male
- Female

31. Age?

- 15-24
- 25-34
- 35-44
- 45-59
- 60 and above

Appendix B: Residential Compounds Regulations

Approved Residential Compound Development Regulations

Summary Sheet (1 of 2)

(revised July, 16, 2008)

Compound Size	Maximum Density	Permitted Use	Min. Building Setbacks	Building Size & No. of Units	Built Up Area	Private Yard Requirements	Building Height	Parking Requirements	Vehicular Access	Common Park & Amenities
0.25 – 2.0 ha	Outside Greater Doha 30 u/ha	Villas Attached Villas	From Boundary 5m adjacent access road 3m from other boundaries Front (Façade - Façade) 12 meters Side (Façade - Façade) 6m with windows 3m w/o windows Rear: (Façade - Façade) 6m	Width: min. 8m	150 sq.m/Unit Min. Outside Greater Doha	Min of 25 sq. m. level area per unit with min. width and depth of 3.0 m (May be covered by upper floors)	G+1+P **	1.25 stalls / unit average (plus) Visitor - 0.15 / unit	1 main entrance (with guard-house) Road – min. 8.0 m. (curb – curb)	The greater of: 5% gross site area (or) 250 sq. m. Club house (optional)
	Inside Greater Doha 35 u/ha									
2.1 – 4.0 ha	Outside Greater Doha 30 u/ha	Villas / Attached Villas	From Boundary 5m adjacent any road 3m adjacent other plots (for main Road) Front: (Façade - Façade) 12 - 14m (14m is for main Road) Side: (Façade - Façade) 6m with windows 3m w/o windows Rear: (Façade - Façade) 6m	Width: min. 8m	150sq.m/Unit Min. Outside Greater Doha	Min of 25 sq. m. level area per unit with min. width and depth of 3.0 m (May be covered by upper floors)	G+1+P **	1.25 stalls / unit average (plus) Visitor - 0.15 / unit	Min 1 frontage road required for each 3 ha or part thereof 1 main entrance with guard-house (min 14 m ROW with sidewalks and handicapped centre median / boulevards.)	-8% of gross site area for recreational park (may include recreation buildings/facilities, and pool areas) (Can include commercial use, administration offices, guard houses, mosques, etc.)
	(or)									
	Inside Greater Doha 35 u/ha									
		Row Houses***		Width: min. 8 m Length – max 50 m Max No. = 50% of Villas Width: case by case	150sq.m/Unit Min. Outside Greater Doha	Min of 25 sq. m. area at uniform elevation per unit with min. width and depth of 3.0 m (May be covered by upper floors)	G+1+P **	1.25 stalls / unit average (plus) Visitor - 0.15 / unit	1 emergency access (min. 12 m. ROW and 8.0 meter curb to curb) Primary Roads – 8.0 m. curb – curb plus 2m sidewalks both sides. Local Roads – 8.0 m. curb – curb and sidewalks optional	- each park must have permanent frontage along at least one road. - min. park size is 250m ² - Park width cannot be less than 2/3 of park length. (Additional Minimum Requirements as listed below)
		Other Uses: **** (Mosque, Nursery, Fitness & Recreation Facility, Club House, Administration, Commercial)			150sq.m/Unit Min. Inside Greater Doha Case by Case	N/A	G+1	1 stall / 65 sq. m. GFA		

Notes:

- * Maximum length of any straight/uninterrupted road segment is 300 m.
- ** Penthouse must be set back ≥2m from roof-line & area cannot exceed 30% of ground floor cover area
- *** Max. 4 units per Row House unit. Total units not to exceed 50% of all villas.
- **** All "Other Uses" must be to service residents of the compound only and cannot exceed 2.5% of total cover area

Additional Minimum Common Park & Amenity Requirements:

- Compounds < 1.0 ha (if ≤ 30 unit) - Shaded children's play ground, shaded seating areas, grass play areas, club house & swimming pool(optional)
- Compounds ≥ 1.0 ha
 - Min. 100 sq m grassed play field / 20 units (consolidated)
 - 1 Adult swimming pool & 1 tot wading pool / 6.0 ha (or part thereof)
 - 1 multi purpose court (e.g., basketball, volleyball, dodgeball) / 100 units
 - Shaded seating areas, walking / jogging trails etc.
 - 1 nursery / 0ha (or part thereof)

Building Coverage (footprint of all buildings)

Site coverage (compounds < 4.0 ha) – max. 40% gross site

Approved Residential Compound Development Regulations

Permitted Use Summary Sheet (2 of 2)

(Revised July, 16, 2008)

Compound Size	Maximum Density	Permitted Use	Min. Building Setbacks	Building Size / No. of Units	Built Up Area	Private Yard Requirements	Building Height	Parking Requirements	Compound Vehicular Access	Common Park & Amenities
4.1 - 12.0 ha (or more additional sites and services may be permitted to be provided)	Outside Greater Doha (Villas, Attached Villas only) - Up to 30 u/ha Inside Greater Doha (Villas/Attached Villas & Row Houses) - Up to 35 u/ha	Villas & Attached Villas	From Boundary 5m adjacent all boundary walls Front (Façade-Façade) 12-14m- internal roads Side: (Façade - Façade) 6m with windows 3m w/o windows Rear: (Façade - Façade) 6m	Width: min. 8 m Depth: $\geq 5 \times$ width	200sq.m/Unit Min. Outside Greater Doha 150sq.m/Unit Min. Inside Greater Doha	Min of 25 sq. m. level area per unit with min. width and depth of 5.0 m (May be covered by upper floors)	G+1+p **	1.25 stalls / unit average (ghs) Visitor - 0.15 / unit	Min 1 frontage road required for every 3 ha or part thereof Min. 1 entrance with guard-house for compounds ≤ 8 ha Min. 2 entrances with compounds greater than 8 ha Entrance road ROW to be min 12 m wide with sidewalks & landscaped centre median / boulevards) 1 emergency access for every 4 ha. Or part thereof (min. 12 m. ROW and 8.0. meter curb to curb)	- 8% of gross site area for recreational park (may include recreation buildings/facilities, and pool areas) (Can include commercial use, administration offices, guard houses, mosques, etc.) - each park must have promanage frontage along at least one road. - min. park size is 225m ² - Park width cannot be less than 66% of park length. (Additional Requirements as listed below)
	Outside Greater Doha (Compounds with Villa/Row House & Townhouse Apartments) - Up to 40 u/ha Inside Greater Doha (Compounds with Villa/Row House & Townhouse Apartments) - Up to 45 u/ha	Row Houses*** Townhouse Apartments *****	(Same As Above) (Same As Above)	Width: min. 8 m Length - max 50 m Max No. = 50% of Villas Total Apartment Units cannot exceed 50% of total units in compound No. Units / Building: Max. 18 units - G+1 Max. 20 - G+2	Min. 100 sq. m. Per Unit	N/A	G+1 G+2, up to max. 50% of all apartment units	1.25 stalls / unit average (ghs) Visitor - 0.15 / unit Min 2m between parking & façade of apartments 1 stall / 65 sq. m. GFA	Primary Roads - 8.0 m. curb - curb plus min 1.2 m. sidewalks both sides. Local Roads - 8.0 m. curb - curb	
		Other Uses: Mosque, Nursery, Recreation Facility, Club House, Administration, Commercial*****	(Same As Above)	Width: case by case	Case by Case	N/A	G+1			

NOTES:

- * Maximum Length of any straight/uninterrupted internal road is 300 meters
- ** Penthouse must be set back ≥ 2 m from roof-line & area cannot exceed 30% of ground floor cover area
- *** Max. 4 units / row house and max. 25 % total number of compound units
- **** All "Other Uses" must be to service residents of the compound only and cannot exceed 2.5% of total ground floor cover area
- ***** Each unit must have direct exterior access (to internal stairs or hallways), & building design must complement adjacent villas

Additional Minimum Common Park & Amenity Requirements:

- Compounds < 1.0 ha (if ≤ 30 unit) - Shaded children's play ground, shaded seating areas, grass play areas, club house & swimming pool(optional)
- Compounds ≥ 1.0 ha - Min. 100 sqm grassed play field / 20 units (consolidated)
 - 1 children's play structure / 50 units (min. three activity features each)
 - 1 tennis court / 100 units (or part there of)
 - 1 multi purpose court (e.g., basketball, volleyball, dodgeball) / 100 units
 - 1 clubhouse (recreation / fitness / reception hall) / 6 ha (or part there of)
 - 1 centrally located market exclusive to compound use for compounds greater than 6.0 ha
 - 1 nursery / 6ha (or part thereof)
 - Mosques (Case X Case)

Building Coverage / Footprints of all Buildings (compounds > 4.0 ha)
 - 40% of gross site with Villas, Row Houses & G+1 Townhouse Apartments
 - 35% of gross site if G+2 Townhouse Apartments are proposed

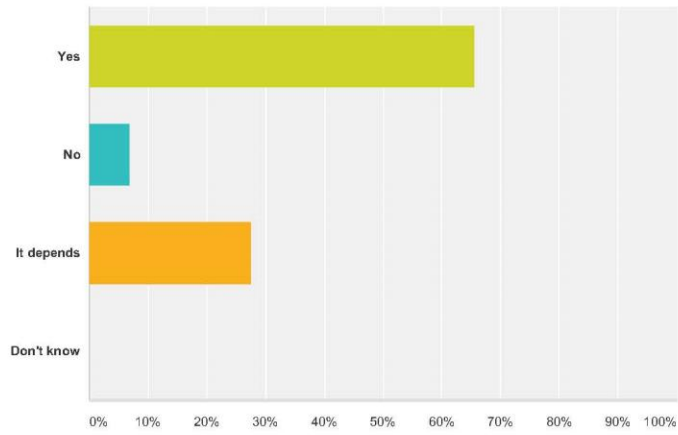
Land Use Allocations (Compounds 4.1 - 12.0 ha. In Size)

- Villas / Row Houses Units (combined) - Min. 50% total units
- Row House Units - Max. 50% total villa/row house units
- All Townhouse Apartment Units - Max. 50% of total units

Appendix C: Survey Results

Q1 Is living in a gated community appealing to you?

Answered: 131 Skipped: 0



Answer Choices	Responses
Yes	65.65% 86
No	6.87% 9
It depends	27.48% 36
Don't know	0.00% 0
Total	131

Q2 Where do you live? (compound name)

Answered: 114 Skipped: 17

#	Responses	Date
1	Aljazeera Village compound	11/30/2015 9:20 PM
2	Al Mirqab 2, Al Waab	11/30/2015 11:26 AM
3	Al Mirqab 2, Al Waab	11/30/2015 11:20 AM
4	Al mirqab 2, Al Waab	11/30/2015 11:14 AM
5	Salwa garden compound on Al Waab street	11/30/2015 11:09 AM
6	Geliah 2	11/30/2015 10:53 AM
7	Les Roses 1	11/23/2015 1:01 AM
8	Beverly hills garden 1	11/21/2015 10:25 PM
9	Halul Compound	11/6/2015 6:27 PM
10	sunrise 1 residences Al Wakra	11/3/2015 7:55 AM
11	Ezdan Village	11/2/2015 3:06 PM
12	Al Faisalia Compound	11/2/2015 9:51 AM
13	Al Mirqab Complex 1	11/2/2015 9:38 AM
14	Dar al Salam compound	11/2/2015 4:12 AM
15	Daar Al Waab	11/2/2015 12:19 AM
16	Al Gassar Resort	11/1/2015 11:05 PM
17	Villa D'este 1	11/1/2015 10:20 PM
18	Ezdan Village 1	11/1/2015 3:54 PM
19	Ben Nasser Gardens	11/1/2015 1:53 PM
20	Beverly Hills Al Rayan	11/1/2015 11:38 AM
21	Champs Elysis	11/1/2015 11:23 AM
22	Sunrise Residence	11/1/2015 11:14 AM
23	education city community housing	11/1/2015 11:09 AM
24	Al Fardan Gardens 1	11/1/2015 11:01 AM
25	Barzan 3	11/1/2015 10:55 AM
26	Al messila gardens	11/1/2015 8:30 AM
27	Cascade	10/31/2015 11:33 PM
28	Muraikh valley 4	10/31/2015 11:24 PM
29	Al Waab 1	10/31/2015 12:23 PM
30	Palm City Garden	10/31/2015 12:18 PM
31	Al Nasseria Compound 4	10/30/2015 12:01 AM
32	AL Waab 1	10/29/2015 10:29 AM
33	Al Faisalia Compound	10/29/2015 10:22 AM
34	AL Waab 1	10/29/2015 10:10 AM
35	Qatar gardens	10/28/2015 8:25 AM

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36	ezdan village 24	10/28/2015 7:34 AM
37	Al jazeera compound	10/28/2015 2:42 AM
38	Ezdan, before have lived in Ain Khalid Gate Compound and Ghazlan Compound	10/28/2015 1:21 AM
39	Al Rayyan Village	10/27/2015 11:15 PM
40	Champs Elyse Garden 1	10/27/2015 8:49 PM
41	Al Faisalia Compound	10/27/2015 8:17 PM
42	Al Jazi Gardens	10/27/2015 7:54 PM
43	Beverly Hills Garden	10/27/2015 7:26 PM
44	No name but Al Khariiyat Area	10/27/2015 6:47 PM
45	Al Dana gardens	10/27/2015 5:29 PM
46	Al Fardan Gardens 6	10/27/2015 4:59 PM
47	Beverly Hills	10/27/2015 4:51 PM
48	Barzan 2	10/27/2015 4:35 PM
49	Al Rayyan Village	10/27/2015 4:33 PM
50	Cannot disclose	10/27/2015 3:41 PM
51	gharrafa grand	10/27/2015 3:24 PM
52	Beverly Hills 13	10/27/2015 3:18 PM
53	Gharrafa gardens	10/27/2015 3:15 PM
54	Y Village	10/27/2015 3:01 PM
55	Beverly Hills Gardens 1	10/27/2015 2:37 PM
56	samrya gardens	10/27/2015 2:17 PM
57	ezdan compound 02	10/27/2015 2:17 PM
58	Palm City Gardens	10/27/2015 2:05 PM
59	Al fardan 4	10/27/2015 1:36 PM
60	Dar Al Nouf	10/27/2015 1:27 PM
61	royal gardens 1	10/27/2015 1:27 PM
62	Al Mirqab 1	10/27/2015 1:26 PM
63	BHG 10	10/27/2015 1:00 PM
64	beverly hills al rayyan	10/27/2015 12:21 PM
65	Qatar Gardens	10/27/2015 11:31 AM
66	EZDAN 11	10/27/2015 10:57 AM
67	Beverly hills garden 1	10/27/2015 10:19 AM
68	Qipco	10/27/2015 9:22 AM
69	new doha residential complex	10/27/2015 7:35 AM
70	Al waab 1	10/27/2015 1:30 AM
71	Beverly hills garden 1	10/27/2015 1:26 AM
72	Palm city garden	10/27/2015 1:22 AM
73	Rayyan garden	10/27/2015 1:14 AM
74	West Bay Lagoon	10/27/2015 12:49 AM
75	QICR	10/27/2015 12:45 AM
76	Aljerian	10/27/2015 12:37 AM

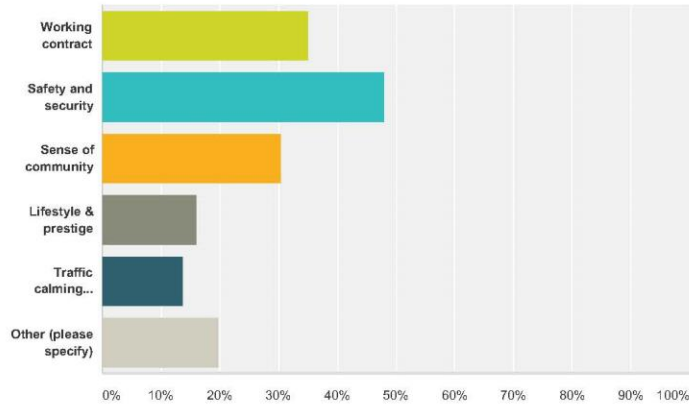
Gated Communities and Neighborhood Livability in Doha

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77	Al rayyan oasis	10/26/2015 11:48 PM
78	Baab Al Rayyan Complex 1	10/26/2015 10:41 PM
79	Al ain gardens	10/26/2015 10:36 PM
80	Aswan Gardens	10/26/2015 10:20 PM
81	Al Jazi Gardens	10/26/2015 10:03 PM
82	Les Roses 1	10/26/2015 9:35 PM
83	Al Jazi Gardens	10/26/2015 9:12 PM
84	It's new and still without a name	10/26/2015 9:10 PM
85	Ezdan compound no. 22	10/26/2015 9:07 PM
86	Dar Al Salam	10/26/2015 9:06 PM
87	Ezdan37	10/26/2015 8:46 PM
88	les Roses1 compound	10/26/2015 7:10 PM
89	Champs élysées gardens	10/26/2015 7:08 PM
90	9 Pearls Compound	10/26/2015 6:28 PM
91	Al Fardan Gardens	10/26/2015 6:04 PM
92	Rosa Village	10/26/2015 5:50 PM
93	Al ghazlan	10/26/2015 5:22 PM
94	Dragon compound	10/26/2015 5:08 PM
95	Al Dana Gardens	10/26/2015 5:01 PM
96	Al Fardan gardens 1	10/26/2015 4:21 PM
97	Ezdan 31	10/26/2015 4:19 PM
98	EZDAN VILLAGE	10/26/2015 4:13 PM
99	Pear Qatar	10/26/2015 4:12 PM
100	Ezdan compound	10/26/2015 4:06 PM
101	حدائق البيت	10/26/2015 4:06 PM
102	beverly hills compound	10/26/2015 3:49 PM
103	Mallu Malbani compound	10/26/2015 3:43 PM
104	dar al salam maamoura	10/26/2015 2:39 PM
105	Ezdan	10/26/2015 1:59 PM
106	sidra village	10/26/2015 1:50 PM
107	Alrayyan	10/26/2015 1:41 PM
108	Janayen Alwaab	10/26/2015 1:03 PM
109	Jbk	10/26/2015 12:56 PM
110	Barwa city abu hamour	10/26/2015 12:52 PM
111	Dar Al Salam Compound	10/26/2015 11:47 AM
112	Dar Al Wabb	10/26/2015 10:04 AM
113	Dar al salam Maamoura	10/26/2015 9:29 AM
114	Paradise complex	10/25/2015 11:59 PM

Q3 What was your motivation to move into a gated community?

Answered: 131 Skipped: 0



Answer Choices	Responses
Working contract	35.11% 46
Safety and security	48.09% 63
Sense of community	30.53% 40
Lifestyle & prestige	16.03% 21
Traffic calming environment	13.74% 18
Other (please specify)	19.85% 26
Total Respondents: 131	

#	Other (please specify)	Date
1	Facilities	11/6/2015 6:27 PM
2	I am a minor and my parents decided to move into a gated community	11/2/2015 12:19 AM
3	More practical for kids	11/1/2015 10:20 PM
4	Close to may work, have a garden for my baby	11/1/2015 11:01 AM
5	Chosen by company	11/1/2015 10:55 AM
6	Facilities	10/27/2015 7:54 PM
7	Availability	10/27/2015 7:26 PM
8	Facilities available and other children for my kids to socialise. proximity to school	10/27/2015 3:18 PM
9	Seemed the done thing	10/27/2015 3:15 PM
10	Close to school	10/27/2015 2:37 PM
11	only option at time of move.	10/27/2015 1:27 PM

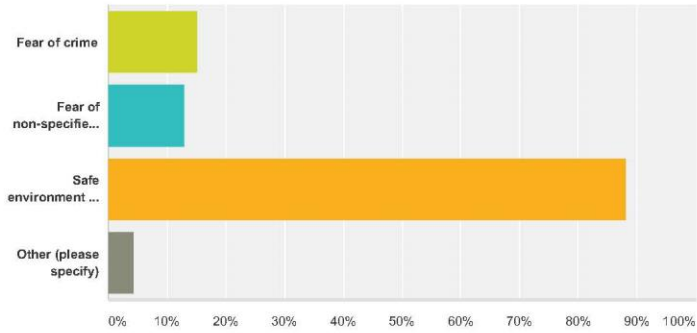
Gated Communities and Neighborhood Livability in Doha

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12	childfriendly	10/27/2015 1:26 PM
13	facilities	10/27/2015 12:21 PM
14	Social for children	10/27/2015 12:49 AM
15	Company compound	10/26/2015 11:48 PM
16	Where our company puts people	10/26/2015 10:03 PM
17	Close to work and schools (no stand alone at our price point)	10/26/2015 9:12 PM
18	Free housing	10/26/2015 9:10 PM
19	for the children to enjoy playing on the streets	10/26/2015 6:28 PM
20	LOW PRICE	10/26/2015 4:13 PM
21	Facilities: swimming pool and children playground	10/26/2015 4:09 PM
22	spacious house	10/26/2015 2:39 PM
23	High rent prices in other places	10/26/2015 1:59 PM
24	Facility available and service provided	10/26/2015 10:04 AM
25	Bigger space	10/26/2015 9:29 AM
26	Good quality houses	10/26/2015 12:40 AM

Q4 If the reason is safety and security, what does it concern?

Answered: 92 Skipped: 39

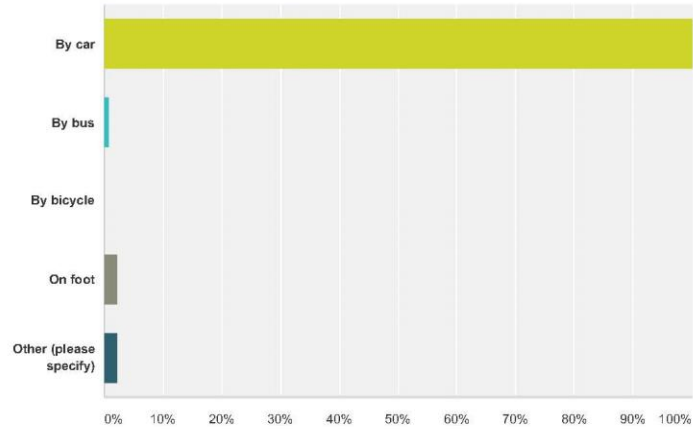


Answer Choices	Responses
Fear of crime	15.22% 14
Fear of non-specified "others"	13.04% 12
Safe environment for your children to play	88.04% 81
Other (please specify)	4.35% 4
Total Respondents: 92	

#	Other (please specify)	Date
1	no other choice	11/30/2015 11:26 AM
2	comfort and maintenance availability	11/2/2015 9:38 AM
3	Neighbors to help in emergency	11/2/2015 4:12 AM
4	Not as worried about a toddler or pet leaving the compound. We had an incident where our toddler figured out how to open the door and go outside.	10/27/2015 12:37 AM

Q5 How do you reach the city?

Answered: 130 Skipped: 1

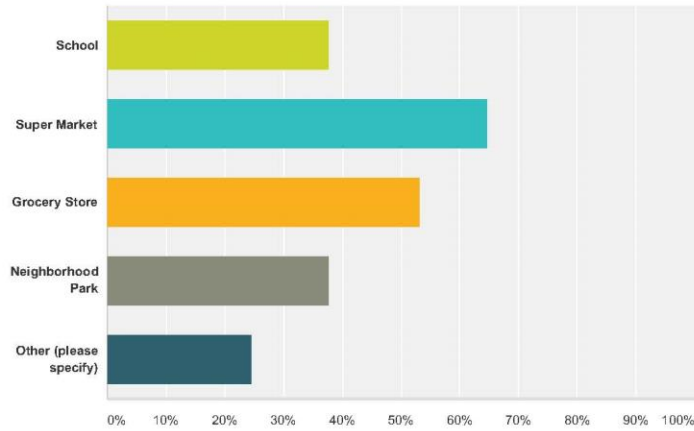


Answer Choices	Responses	
By car	100.00%	130
By bus	0.77%	1
By bicycle	0.00%	0
On foot	2.31%	3
Other (please specify)	2.31%	3
Total Respondents: 130		

#	Other (please specify)	Date
1	future metro	11/30/2015 11:09 AM
2	Taxi	11/1/2015 3:54 PM
3	taxi	11/1/2015 11:09 AM

Q6 What kind of local amenities do you have outside your compound within a radius of 1 km?

Answered: 122 Skipped: 9



Answer Choices	Responses
School	37.70% 46
Super Market	64.75% 79
Grocery Store	53.28% 65
Neighborhood Park	37.70% 46
Other (please specify)	24.59% 30
Total Respondents: 122	

#	Other (please specify)	Date
1	only compounds	11/30/2015 11:26 AM
2	sports facilities	11/30/2015 11:20 AM
3	mall	11/30/2015 11:09 AM
4	gym, beauty center, nurcery, vet, community center for Qatari, play ground, mosque	11/30/2015 10:53 AM
5	there is a school but my kids go to another one which is more far away	11/23/2015 1:01 AM
6	Plaza: with different stores	11/6/2015 6:27 PM
7	Mall	11/2/2015 12:19 AM
8	Shopping mall, restaurants, hotels, katar	11/1/2015 11:05 PM
9	Mall	11/1/2015 10:20 PM
10	Malls, Hospiatal	11/1/2015 3:54 PM

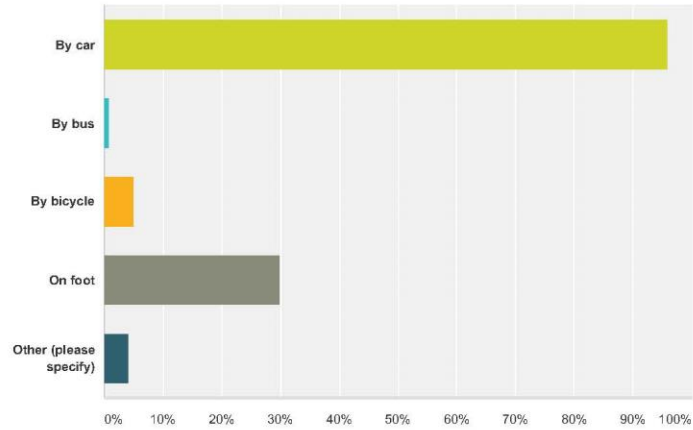
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11	All Qatar Foundation services	11/1/2015 11:38 AM
12	Club, dry clean	11/1/2015 11:09 AM
13	nursery, my work office	11/1/2015 11:01 AM
14	Malls, sports stadium,	10/28/2015 3:10 PM
15	petrol station	10/28/2015 7:34 AM
16	Nothing	10/28/2015 1:21 AM
17	gas station, the mall	10/27/2015 1:27 PM
18	petrol station	10/27/2015 12:21 PM
19	Only minimarket and playground at compound, nothing else open yet (compound next to Lusail)	10/27/2015 9:22 AM
20	Petrol Station	10/27/2015 12:49 AM
21	small baqala	10/27/2015 12:37 AM
22	nothing	10/26/2015 9:35 PM
23	small shops, restaurant, small grocery	10/26/2015 9:10 PM
24	Nothing	10/26/2015 8:46 PM
25	Woqod, Al Gharafa Health Center, Al Gharafa Sports Club, Beauty Salon, Chocolate, flowers and gift shop	10/26/2015 5:50 PM
26	University , health center, mosque	10/26/2015 5:22 PM
27	nothing	10/26/2015 3:03 PM
28	gas station	10/26/2015 2:39 PM
29	all the above	10/26/2015 11:47 AM
30	Nothing	10/26/2015 12:40 AM

Q7 In case some or all of them exist. How do you reach these amenities?

Answered: 121 Skipped: 10

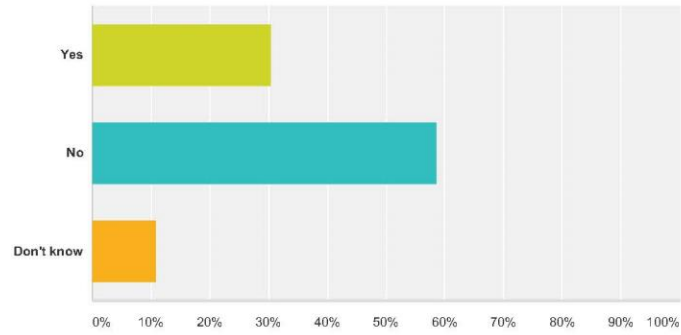


Answer Choices	Responses
By car	95.87% 116
By bus	0.83% 1
By bicycle	4.96% 6
On foot	29.75% 36
Other (please specify)	4.13% 5
Total Respondents: 121	

#	Other (please specify)	Date
1	rarely to go on foot	11/30/2015 11:20 AM
2	Dangerous to cross the street	11/30/2015 10:53 AM
3	Taxi	11/1/2015 3:54 PM
4	Area is new and walking is impractical	10/26/2015 9:10 PM
5	Nothing	10/26/2015 8:46 PM

Q8 Does the walls and gates of your gated compound affect your connectivity with the surrounding?

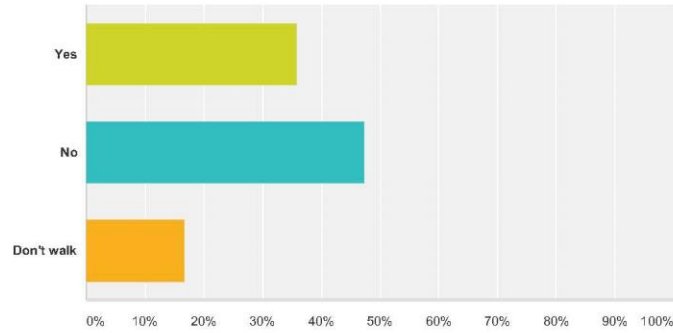
Answered: 128 Skipped: 3



Answer Choices	Responses
Yes	30.47% 39
No	58.59% 75
Don't know	10.94% 14
Total	128

Q9 Do you find it difficult to walk to a neighboring block?

Answered: 131 Skipped: 0



Answer Choices	Responses
Yes	35.88% 47
No	47.33% 62
Don't walk	16.79% 22
Total	131

#	If yes, why? PL mention:	Date
1	beacsue of the walls and gates	11/30/2015 11:26 AM
2	Depends on the walkways	11/30/2015 11:20 AM
3	Cross the road	11/30/2015 11:14 AM
4	the walls cause long diversion	11/30/2015 11:09 AM
5	It will be easier if there is a shortcut, and the heat.	11/30/2015 10:53 AM
6	long distance and no proper path to walk on	11/23/2015 1:01 AM
7	Not enough walk ways around	11/6/2015 6:27 PM
8	not much walkable	11/2/2015 9:38 AM
9	speeding cars on narrow streets	11/1/2015 9:19 PM
10	There's no pavement.	11/1/2015 11:38 AM
11	No proper footpaths	10/30/2015 12:01 AM
12	No real 'block' to walk around!	10/28/2015 8:25 AM
13	Construction, small children with me	10/27/2015 11:15 PM
14	But nothing around to walk to	10/27/2015 6:47 PM
15	No foot paths	10/27/2015 5:29 PM
16	Too far to walk	10/27/2015 3:41 PM
17	No pavements	10/27/2015 3:15 PM

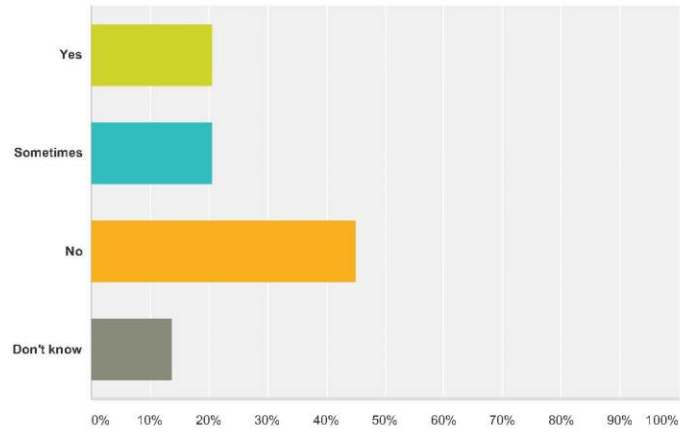
Gated Communities and Neighborhood Livability in Doha

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18	We are surrounded by Sand lots	10/27/2015 3:01 PM
19	There is NO pedestrian areas that are totally complete to enable safe walking. I LOVE walking but it is hard to find areas that are suitable to use this as a means of transport.	10/27/2015 2:05 PM
20	the area is not very walkable. other gated communities so streets aren't very appealing	10/27/2015 1:27 PM
21	if you have to cross main roads, there are not enough pedestrian lights	10/27/2015 1:26 PM
22	No footpath, only sand and construction traffic on the single road we have to cross	10/27/2015 9:22 AM
23	There are safety issues. No pavement for walking	10/26/2015 11:48 PM
24	No pavement, roads unsafe	10/26/2015 10:20 PM
25	Dangerous road junctions lack of pedestrian crossings	10/26/2015 8:04 PM
26	too big compound	10/26/2015 7:10 PM
27	Little or no sidewalks and no lights and car driving very fast.	10/26/2015 4:21 PM
28	There is no walking path around other than in the public parks it's just something not common in Doha to walk around the neighborhood	10/26/2015 10:04 AM
29	The weather	10/26/2015 9:29 AM

Q10 Do you consider the streets outside your gated community as vital streets? In terms of human street-level interaction

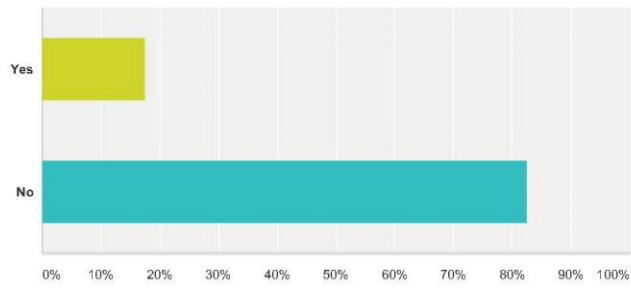
Answered: 131 Skipped: 0



Answer Choices	Responses	
Yes	20.61%	27
Sometimes	20.61%	27
No	45.04%	59
Don't know	13.74%	18
Total		131

Q11 Do you interact with people living in your surrounding area outside your compound who can be reached within a walking distance?

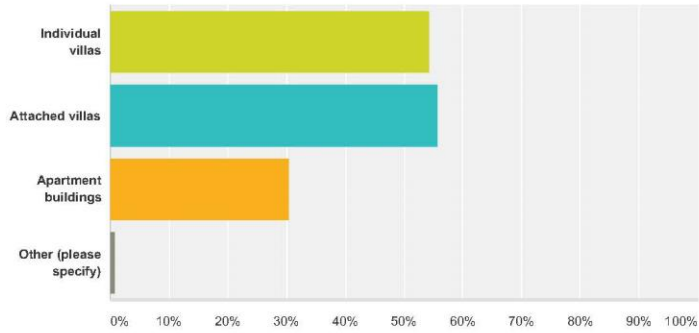
Answered: 131 Skipped: 0



Answer Choices	Responses
Yes	17.56% 23
No	82.44% 108
Total	131

Q12 What are the housing options available inside your compound?

Answered: 131 Skipped: 0

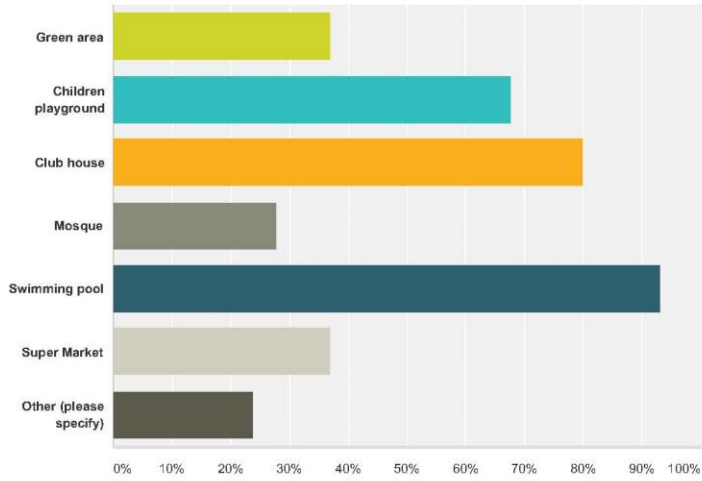


Answer Choices	Responses
Individual villas	54.20% 71
Attached villas	55.73% 73
Apartment buildings	30.53% 40
Other (please specify)	0.76% 1
Total Respondents: 131	

#	Other (please specify)	Date
1	Row houses	10/28/2015 1:21 AM

Q13 Which of the following facilities is/are available inside your compound?

Answered: 130 Skipped: 1



Answer Choices	Responses
Green area	36.92% 48
Children playground	67.69% 88
Club house	80.00% 104
Mosque	27.69% 36
Swimming pool	93.08% 121
Super Market	36.92% 48
Other (please specify)	23.85% 31
Total Respondents: 130	

#	Other (please specify)	Date
1	gym	11/30/2015 11:09 AM
2	library	11/30/2015 10:53 AM
3	Gym	11/6/2015 6:27 PM
4	car wash, laundry, ATM	11/2/2015 3:06 PM
5	Gym	11/2/2015 12:19 AM
6	Spa, laundry, restaurant, bank	11/1/2015 11:05 PM
7	small store	11/1/2015 9:19 PM

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8	Gym, laundry, Basket ball ground, tennis ground	11/1/2015 11:38 AM
9	Gym	10/28/2015 3:10 PM
10	Basket ball and foot ball courts	10/28/2015 1:21 AM
11	gym, squash, tennis	10/27/2015 7:54 PM
12	laundry, tennis court	10/27/2015 4:59 PM
13	Tennis Court	10/27/2015 4:35 PM
14	Squash, gym, hairdresser	10/27/2015 3:01 PM
15	Laundry, beauty saloon	10/27/2015 2:37 PM
16	Beautician, gym	10/27/2015 2:37 PM
17	Laundry	10/27/2015 1:36 PM
18	laundry	10/27/2015 1:26 PM
19	tennis court	10/27/2015 10:19 AM
20	our swimming pool has very poor cleaning conditions that we choose not to use it.	10/27/2015 12:37 AM
21	Gym	10/26/2015 10:20 PM
22	2 restaurants	10/26/2015 10:03 PM
23	Hairdresser, gyms (with classes), restaurant	10/26/2015 9:12 PM
24	Prayer area	10/26/2015 9:10 PM
25	Gym & Barber Shop	10/26/2015 9:06 PM
26	Laundry	10/26/2015 8:46 PM
27	Laundrette, Restaurant	10/26/2015 6:04 PM
28	Restaurant	10/26/2015 4:21 PM
29	School	10/26/2015 4:19 PM
30	gym	10/26/2015 2:39 PM
31	School	10/26/2015 12:52 PM

Q14 In your opinion, what kind of facilities are missing in your compound?

Answered: 97 Skipped: 34

#	Responses	Date
1	non	11/30/2015 9:20 PM
2	women beauty center	11/30/2015 11:09 AM
3	mini market	11/23/2015 1:01 AM
4	All the above that's listed	11/6/2015 6:27 PM
5	a large proper area for children to play	11/3/2015 7:55 AM
6	Day Care / Nursery, Cafe	11/2/2015 3:06 PM
7	More Green area	11/2/2015 9:38 AM
8	Tennis court, indoor play area	11/2/2015 4:12 AM
9	A green area and an entertainment center with a TV and couch	11/2/2015 12:19 AM
10	Supermarket	11/1/2015 11:05 PM
11	Green area, play grounds	11/1/2015 10:20 PM
12	a green area	11/1/2015 9:19 PM
13	Park, Outdoor Playarea	11/1/2015 3:54 PM
14	play ground, gym	11/1/2015 1:53 PM
15	Indoor children lplayground	11/1/2015 11:38 AM
16	A Super market	11/1/2015 11:23 AM
17	green area, car wash	11/1/2015 11:14 AM
18	supermarket, coffee shop	11/1/2015 11:09 AM
19	grocery shop, cash machine, beauty salon	11/1/2015 11:01 AM
20	Supermarket or cafe	11/1/2015 8:30 AM
21	Nothing	10/31/2015 11:33 PM
22	Supermarket, green areas	10/31/2015 11:24 PM
23	Our compound has an unmaintained swimming pool and an empty clubhouse	10/30/2015 12:01 AM
24	Green Area	10/29/2015 10:22 AM
25	Decent play area and club house	10/28/2015 3:10 PM
26	Store, better playground	10/28/2015 8:25 AM
27	Grocery store	10/28/2015 2:42 AM
28	Laundry, coffee shop/ cafeteria/ restaurant, saloon	10/28/2015 1:21 AM
29	Teenager activities, spa facilities (sauna etc)	10/27/2015 11:15 PM
30	Green Area	10/27/2015 8:57 PM
31	Green Area	10/27/2015 8:49 PM
32	Green Area	10/27/2015 8:17 PM
33	recycling	10/27/2015 7:54 PM
34	Playground, clubhouse, sport facilities	10/27/2015 7:26 PM

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SurveyMonkey

35	Supermarket and coffee shop	10/27/2015 5:29 PM
36	outdoor entertainment playground i.g tennis court, basketball court,...	10/27/2015 4:51 PM
37	Sports facilities, (volleyball court, football space etc) and children's play area	10/27/2015 3:41 PM
38	kids play area, garden	10/27/2015 3:24 PM
39	childrens play area	10/27/2015 3:18 PM
40	Shaded children's play area	10/27/2015 3:15 PM
41	Green areas	10/27/2015 3:01 PM
42	cafe	10/27/2015 2:37 PM
43	Kids playground	10/27/2015 2:37 PM
44	none	10/27/2015 2:17 PM
45	nothing	10/27/2015 2:17 PM
46	An indoor play area for Summer and a inter web for communication/selling goods/making friends	10/27/2015 2:05 PM
47	Outside play area	10/27/2015 1:36 PM
48	Tennis court	10/27/2015 1:27 PM
49	playground or grassy area, proper gym	10/27/2015 1:27 PM
50	supermarket, cafe	10/27/2015 1:26 PM
51	Green area	10/27/2015 1:00 PM
52	children playground	10/27/2015 12:21 PM
53	super market	10/27/2015 11:31 AM
54	LESS GREEN AREAS	10/27/2015 10:57 AM
55	a greean area	10/27/2015 7:35 AM
56	Clubhouse	10/27/2015 12:49 AM
57	There is a club house and pool but they are not being taken care of regarding maintenance so they are not used.	10/27/2015 12:45 AM
58	playground and green area	10/27/2015 12:37 AM
59	Shop, laundrette, coffee shop play area for older children	10/26/2015 11:48 PM
60	Cafe/lunch place	10/26/2015 10:41 PM
61	None	10/26/2015 10:36 PM
62	Playground, tennis court would be nice but compound not big enough	10/26/2015 10:20 PM
63	mini market	10/26/2015 9:35 PM
64	none	10/26/2015 9:12 PM
65	play area, parking	10/26/2015 9:10 PM
66	restaurant , kindergarten , landury	10/26/2015 9:07 PM
67	Larger parking space	10/26/2015 9:06 PM
68	Restaurant or cafe	10/26/2015 8:46 PM
69	nil	10/26/2015 7:10 PM
70	Shop, restaurant, laundry	10/26/2015 7:08 PM
71	tennis court, basketball court	10/26/2015 6:28 PM
72	Green space, good play area	10/26/2015 6:04 PM
73	Decent clubhouse /hangout space - it is there, but not equipped, maintained and fit for use	10/26/2015 5:50 PM
74	Club house	10/26/2015 5:22 PM
75	green area	10/26/2015 5:12 PM

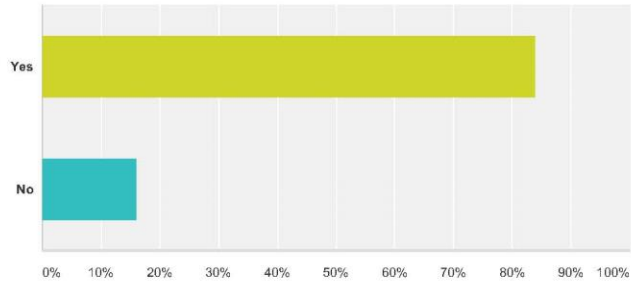
Gated Communities and Neighborhood Livability in Doha

SurveyMonkey

76	Mosque	10/26/2015 5:08 PM
77	supermarket	10/26/2015 4:21 PM
78	NO THING	10/26/2015 4:13 PM
79	Mosque, supermarket, nursery	10/26/2015 4:12 PM
80	Indoor play area for children	10/26/2015 4:09 PM
81	Green area	10/26/2015 4:06 PM
82	Super market	10/26/2015 4:06 PM
83	nothing	10/26/2015 3:49 PM
84	disco	10/26/2015 3:43 PM
85	mini market	10/26/2015 3:03 PM
86	children play area, green area9	10/26/2015 2:39 PM
87	Green areas and parks	10/26/2015 1:59 PM
88	green area and supermarket	10/26/2015 1:50 PM
89	Green area	10/26/2015 1:43 PM
90	garden	10/26/2015 1:41 PM
91	A supermarket	10/26/2015 1:03 PM
92	Gym, swimming pool	10/26/2015 12:52 PM
93	Green Area	10/26/2015 11:47 AM
94	Consedring the size of our compound it's very suffeciant	10/26/2015 10:04 AM
95	children play area, green area	10/26/2015 9:29 AM
96	Green park	10/26/2015 12:40 AM
97	Mini market and a playground	10/25/2015 11:59 PM

Q15 Do you interact with people living inside your compound?

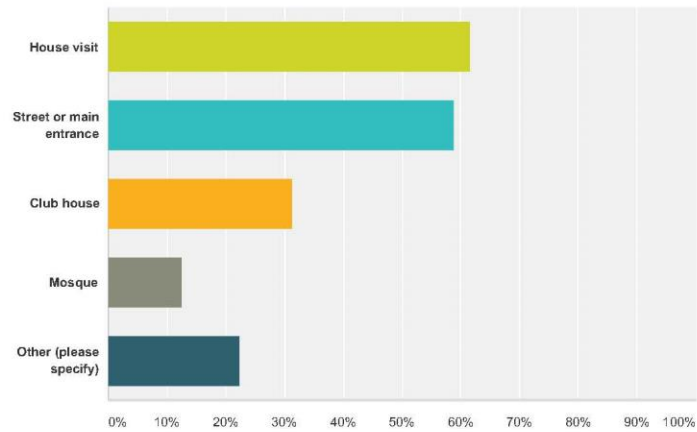
Answered: 131 Skipped: 0



Answer Choices	Responses
Yes	83.97% 110
No	16.03% 21
Total	131

Q16 If yes, where do you usually meet?

Answered: 112 Skipped: 19



Answer Choices	Responses
House visit	61.61% 69
Street or main entrance	58.93% 66
Club house	31.25% 35
Mosque	12.50% 14
Other (please specify)	22.32% 25
Total Respondents: 112	

#	Other (please specify)	Date
1	Swimming pool	11/30/2015 11:09 AM
2	Pool	11/2/2015 4:12 AM
3	Pool area	11/1/2015 11:05 PM
4	On the swimming pool	11/1/2015 10:20 PM
5	playground 1	11/1/2015 11:09 AM
6	Pool	11/1/2015 11:01 AM
7	swimming pool	11/1/2015 10:55 AM
8	Pool	11/1/2015 8:30 AM
9	Pool	10/28/2015 8:25 AM
10	pool, playground	10/27/2015 7:54 PM
11	at the pool	10/27/2015 4:59 PM
12	Children play in the park	10/27/2015 3:15 PM

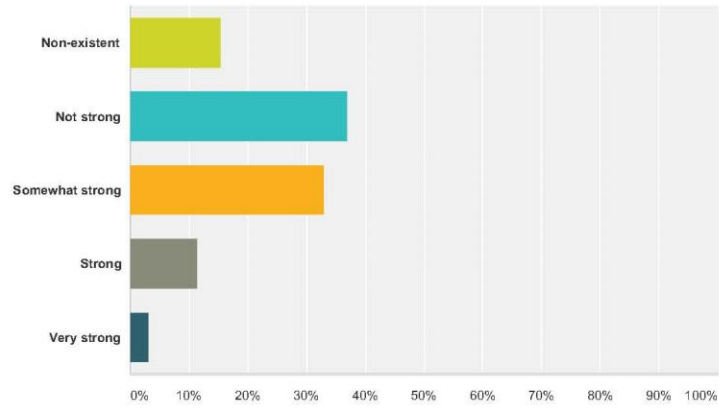
Gated Communities and Neighborhood Livability in Doha

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13	park	10/27/2015 2:17 PM
14	Kids playing in the street	10/27/2015 1:36 PM
15	also its never planned. its only happens if we are both outside at same time	10/27/2015 1:27 PM
16	Playground with kids	10/27/2015 1:00 PM
17	Playground, Swimming pool	10/27/2015 9:22 AM
18	Pool side	10/26/2015 11:48 PM
19	Pool	10/26/2015 10:20 PM
20	playground	10/26/2015 9:12 PM
21	Pool area	10/26/2015 8:04 PM
22	Pool	10/26/2015 6:04 PM
23	Pool	10/26/2015 5:22 PM
24	Pool	10/26/2015 4:21 PM
25	Outside the compound	10/26/2015 1:59 PM

Q17 What is your perceived sense of community and identity within your compound?

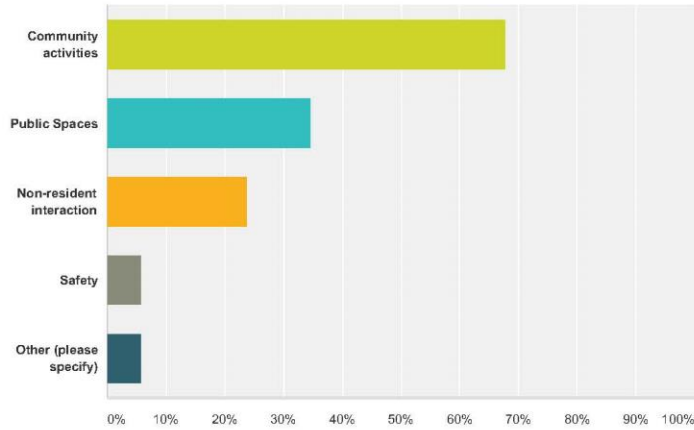
Answered: 130 Skipped: 1



Answer Choices	Responses
Non-existent	15.38% 20
Not strong	36.92% 48
Somewhat strong	33.08% 43
Strong	11.54% 15
Very strong	3.08% 4
Total	130

Q18 What do you feel your compound lacks in community identity?

Answered: 118 Skipped: 13

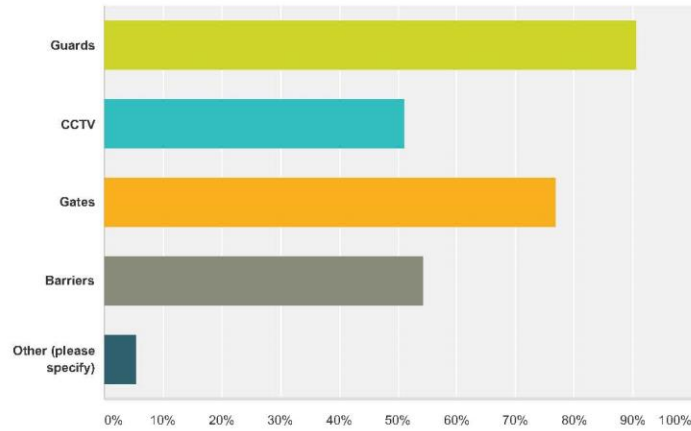


Answer Choices	Responses
Community activities	67.80% 80
Public Spaces	34.75% 41
Non-resident interaction	23.73% 28
Safety	5.93% 7
Other (please specify)	5.93% 7
Total Respondents: 118	

#	Other (please specify)	Date
1	Nothing	11/1/2015 11:05 PM
2	Big gathering with everybody so everybody knows each other	11/1/2015 11:01 AM
3	Better compound management of tenants	10/27/2015 3:18 PM
4	People do not leave their villas, the maids go to park with kids	10/27/2015 1:00 PM
5	Multi cultural interactions (same nationalities/work colleagues tend to stay together)	10/26/2015 9:12 PM
6	No body takes time out to meet other people	10/26/2015 4:12 PM
7	Quality	10/26/2015 4:06 PM

**Q19 What are the security measures provided at the compound main entrance?
Tick all applicable:**

Answered: 129 Skipped: 2

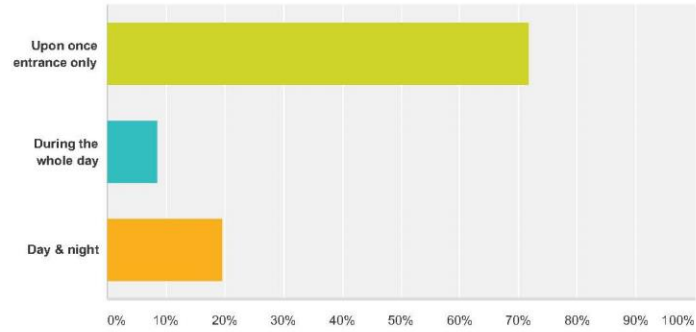


Answer Choices	Responses
Guards	90.70% 117
CCTV	51.16% 66
Gates	76.74% 99
Barriers	54.26% 70
Other (please specify)	5.43% 7
Total Respondents: 129	

#	Other (please specify)	Date
1	Sliding gates	11/30/2015 10:53 AM
2	ID is taken from guests and given back on departure. car plates number are taken	11/1/2015 11:05 PM
3	Police	11/1/2015 11:01 AM
4	Ad hoc use of barrier and security	10/30/2015 12:01 AM
5	razor wire on the walls	10/27/2015 3:18 PM
6	Decent furniture near pool, bbq pits, benches throughout	10/26/2015 5:50 PM
7	Police	10/26/2015 4:21 PM

Q20 When do gates or barriers open?

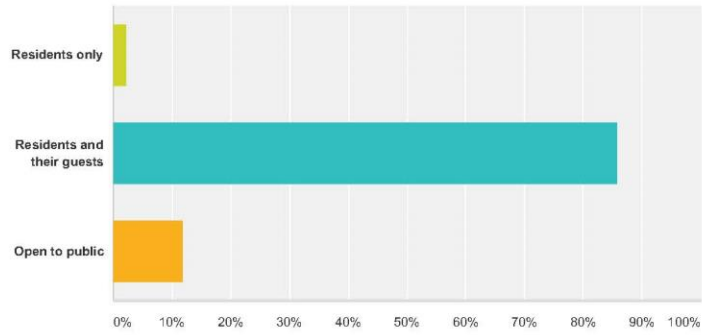
Answered: 128 Skipped: 3



Answer Choices	Responses
Upon once entrance only	71.88% 92
During the whole day	8.59% 11
Day & night	19.53% 25
Total	128

Q21 In case there are guards on the main entrance. Who is allowed to enter the compound?

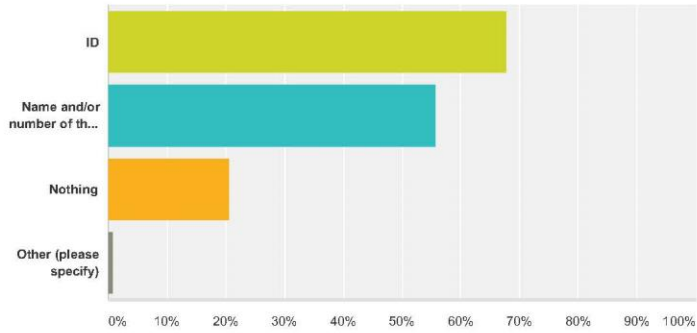
Answered: 126 Skipped: 5



Answer Choices	Responses
Residents only	2.38% 3
Residents and their guests	85.71% 108
Open to public	11.90% 15
Total	126

Q22 What do visitors required to provide upon entry?

Answered: 131 Skipped: 0

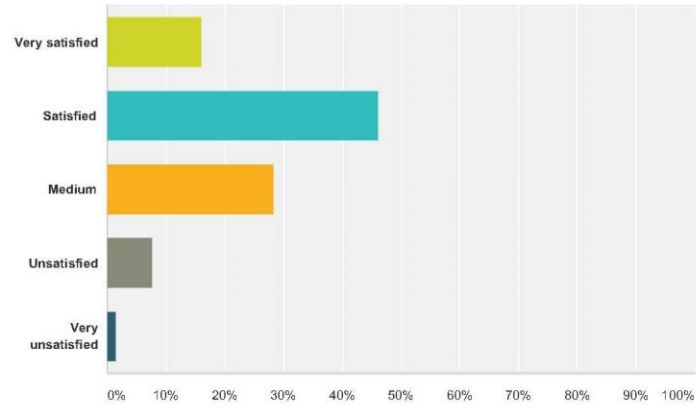


Answer Choices	Responses
ID	67.94% 89
Name and/or number of the resident's place	55.73% 73
Nothing	20.61% 27
Other (please specify)	0.76% 1
Total Respondents: 131	

#	Other (please specify)	Date
1	they recognize the residents by face	11/30/2015 10:53 AM

Q23 How do you rate your satisfaction of your gated community?

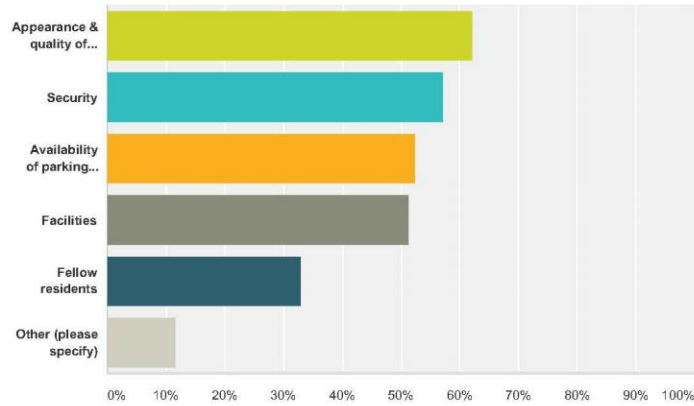
Answered: 130 Skipped: 1



Answer Choices	Responses	
Very satisfied	16.15%	21
Satisfied	46.15%	60
Medium	28.46%	37
Unsatisfied	7.69%	10
Very unsatisfied	1.54%	2
Total		130

Q24 If satisfied, what is the reason behind your satisfaction?

Answered: 103 Skipped: 28



Answer Choices	Responses
Appearance & quality of housing	62.14% 64
Security	57.28% 59
Availability of parking spaces	52.43% 54
Facilities	51.46% 53
Fellow residents	33.01% 34
Other (please specify)	11.65% 12
Total Respondents: 103	

#	Other (please specify)	Date
1	more or less	11/30/2015 11:20 AM
2	independence	11/30/2015 11:09 AM
3	Children need space. Safety for my children. Strange people might steal	11/30/2015 10:53 AM
4	close proximity to school and work place	11/3/2015 7:55 AM
5	Convenience	11/2/2015 9:38 AM
6	Service	11/1/2015 11:05 PM
7	Rent is reasonable	11/1/2015 3:54 PM
8	Cheap housing option	10/28/2015 1:21 AM
9	Good location, proximity to school, malls, parks etc, also space and size of villa	10/26/2015 10:20 PM
10	Location	10/26/2015 5:22 PM
11	Rent	10/26/2015 5:08 PM

12	Covenient	10/26/2015 4:09 PM
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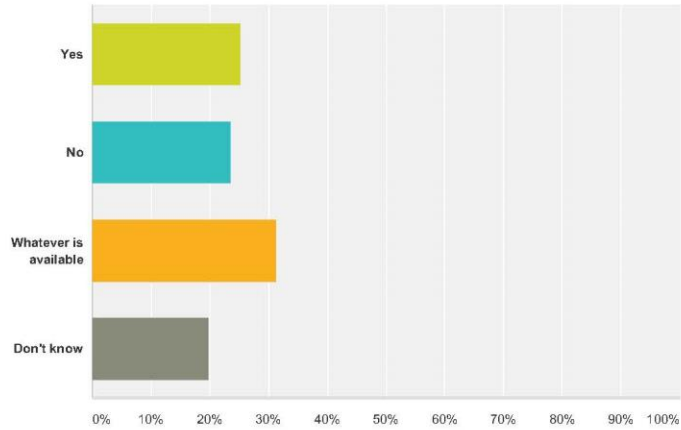
Q25 If unsatisfied, please mention the reason behind your dissatisfaction:

Answered: 26 Skipped: 105

#	Responses	Date
1	No social life	12/1/2015 4:45 PM
2	Parking spaces are limited	12/1/2015 4:35 PM
3	The roads within the compound are very narrow and I don't that it is fully furnished without an option to ask to remove the furniture and buy your own	11/2/2015 3:06 PM
4	Poor compound management	11/2/2015 4:12 AM
5	They will let anyone on	11/1/2015 9:19 PM
6	Not enough parking spaces, dirtyness, too much security for guests	11/1/2015 11:38 AM
7	No structure as to when barriers are down or when gate is manned by security	10/30/2015 12:01 AM
8	Lazy maintained pool is falling apart the play area has been trashed and no one cleans up	10/28/2015 3:10 PM
9	Safety, construction noise, parking design	10/28/2015 2:42 AM
10	I feel there is a lack of respect for others property and late night noise	10/27/2015 6:47 PM
11	Needs a better gate man, needs better facilities	10/27/2015 3:18 PM
12	Though I am unsatisfied with the maintenance of public areas (pool etc) this is POOR on a managerial level (the maintenance men who visit are actually amazing)	10/27/2015 2:05 PM
13	hardly any sense of community, lack of updated facilities as we live in a much older compound	10/27/2015 1:27 PM
14	Maintenance of shared facilities is very poor.	10/27/2015 1:00 PM
15	poor pool maintenance, too much furniture provided, lack of amenities	10/27/2015 12:37 AM
16	no green space or play area, inadequate parking, children excessively noisy outside late at night, unsupervised children/teens being destructive and ruining public property, poorly managed compound	10/26/2015 9:10 PM
17	Lack of community feel	10/26/2015 6:04 PM
18	Maintenance and an incompetent manager	10/26/2015 5:50 PM
19	Quality of housing not that good	10/26/2015 4:06 PM
20	no pub	10/26/2015 3:43 PM
21	loud neighbors, court in front of my house open 24/7 so too much noise even late at night	10/26/2015 2:39 PM
22	Low maintenance	10/26/2015 1:43 PM
23	It lacks security	10/26/2015 12:52 PM
24	No sense of community	10/26/2015 10:04 AM
25	Poor service	10/26/2015 9:29 AM
26	Needs maintaince and more security	10/25/2015 11:59 PM

Q26 Would you live in a non-gated community in the future?

Answered: 131 Skipped: 0



Answer Choices	Responses
Yes	25.19% 33
No	23.66% 31
Whatever is available	31.30% 41
Don't know	19.85% 26
Total	131

#	If yes, why? Please mention	Date
1	prefer individual villas	12/1/2015 4:35 PM
2	It is better	11/30/2015 11:09 AM
3	if there will be a good community	11/30/2015 10:53 AM
4	Really depends on location and rental prices	11/2/2015 3:06 PM
5	Provided having the same services I will especially maintenance issues	11/2/2015 9:38 AM
6	It's not something important for me	11/1/2015 10:20 PM
7	I had no choice, wanted to be close to work, otherwise, I prefer the european housing style (many villas in a street, and no gate nor barrier around)	11/1/2015 11:01 AM
8	Fed up of teenager boys breaking things	10/28/2015 3:10 PM
9	It would depend on the circumstances, location, etc	10/27/2015 11:15 PM
10	for children to safely play outside	10/27/2015 4:59 PM
11	Have lived in non gated communities before	10/27/2015 3:18 PM
12	But not in Qatar	10/27/2015 1:36 PM

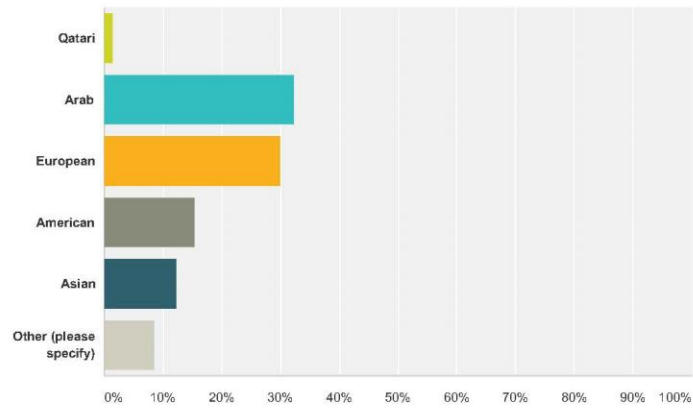
Gated Communities and Neighborhood Livability in Doha

SurveyMonkey

13	Feel the community is secure	10/26/2015 10:20 PM
14	the idea of living in an exclusive area, or area only accessible to some, is appealing the the majority of people	10/26/2015 9:10 PM
15	It is safe to live anywhere in Doa	10/26/2015 9:06 PM
16	Better quality house	10/26/2015 7:08 PM
17	Community	10/26/2015 5:50 PM

Q27 Nationality?

Answered: 130 Skipped: 1

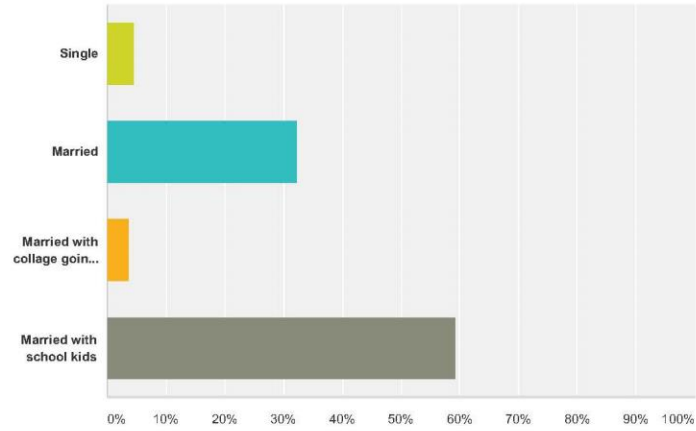


Answer Choices	Responses	
Qatari	1.54%	2
Arab	32.31%	42
European	30.00%	39
American	15.38%	20
Asian	12.31%	16
Other (please specify)	8.46%	11
Total		130

#	Other (please specify)	Date
1	pakistani	11/3/2015 7:55 AM
2	African	11/1/2015 11:15 AM
3	Australian	10/30/2015 12:02 AM
4	Canadian parent, one Arab parent	10/27/2015 3:18 PM
5	New Zealander	10/27/2015 2:08 PM
6	Irish	10/27/2015 1:01 PM
7	egyptian / british	10/27/2015 12:21 PM
8	Canadian	10/26/2015 9:11 PM
9	Australian	10/26/2015 6:28 PM
10	Lebanese	10/26/2015 5:22 PM
11	Syrian	10/26/2015 4:06 PM

Q28 Marital status?

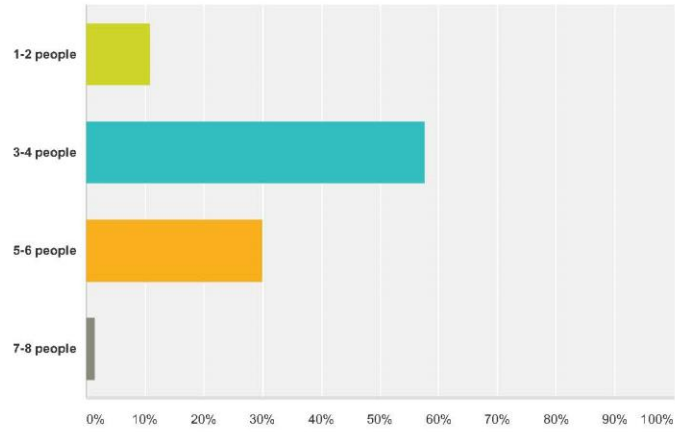
Answered: 130 Skipped: 1



Answer Choices	Responses
Single	4.62% 6
Married	32.31% 42
Married with collage going children	3.85% 5
Married with school kids	59.23% 77
Total	130

Q29 How many people currently live in your house?

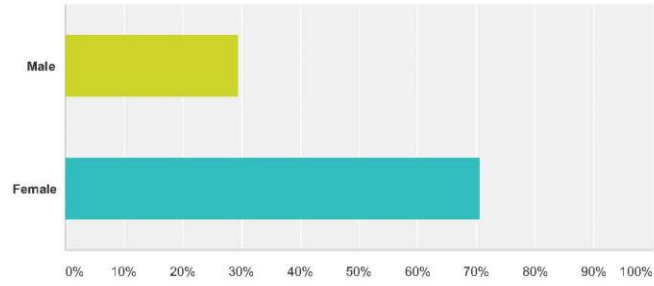
Answered: 130 Skipped: 1



Answer Choices	Responses	
1-2 people	10.77%	14
3-4 people	57.69%	75
5-6 people	30.00%	39
7-8 people	1.54%	2
Total		130

Q30 Gender?

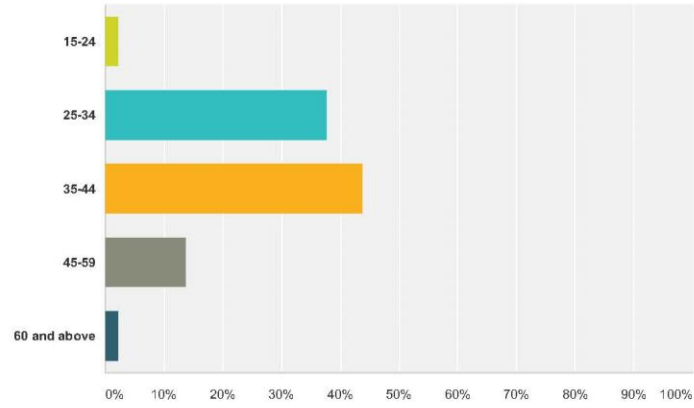
Answered: 129 Skipped: 2



Answer Choices	Responses	
Male	29.46%	38
Female	70.54%	91
Total		129

Q31 Age?

Answered: 130 Skipped: 1



Answer Choices	Responses	
15-24	2.31%	3
25-34	37.69%	49
35-44	43.85%	57
45-59	13.85%	18
60 and above	2.31%	3
Total		130