

The spatial and physical relationship of gated communities in Barbados

by

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Abstract

Gated communities are steadily becoming a part of the Barbadian landscape; however, little is known about the spatial implications these developments have on the wider community and the developments' physical attributes. This research paper examined how gated developments relate spatially and physically to the wider community and compared their physical attributes to non-gated developments. Interviews, aerial photographs, and site visits were used to gather information on three gated communities in Barbados. Findings revealed that gated communities are located among existing residential development; however, the lack of access prior to development, the small scale, and the location of the gated communities did not significantly impact connectivity of the surrounding communities or interfere with the existing infrastructure. The data further indicated that gated communities introduced a non-traditional development pattern that is significantly different to the villages, tenancies, small residential subdivisions that characterize Barbados. Appearing among the traditional development pattern are large enclosed residential areas. Gated developments have further changed the physical character of the Barbadian landscape by introducing homogeneous architectural styles and medium rise developments (which are normally associated with coastal hotel development) to inland areas with modest homes, bungalows, two-storey single detached dwellings with dissimilar styles.

The data suggested that the height and character of the boundaries varied according to the local condition: especially class and views. On the one hand, gated communities employed tall and impermeable barriers where there were unattractive views and a significant class difference between the gated and non-gated communities. On the other hand, lower and more permeable barriers were used in areas with attractive views and where the class of residents was similar. Research further revealed that non-gated developments used similar types of boundary treatment to enclaves; however, these treatments were not as high or quite as extensive as those found in the gated communities. Gated residential developments are likely to become a long term building trend in Barbados. If they increase in scale and numbers they will have an impact on how Barbadians access traditional amenities such as beaches and views; they will distort the physical characteristics that make the island uniquely Barbadian.

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CHAPTER ONE

INTRODUCTION

In the past decade, there has been a growth of gated communities in Barbados. This type of development is relatively new to the Barbadian landscape but there is a demand for these types of developments by local elites, expatriates and nationals returning from Canada, the United Kingdom and the United States. In an effort to meet this demand developers have built upscale villas, townhouses and apartments in private residential developments which offer various amenities such as golf courses, communal pools, on site maintenance staff, and twenty-four hour security. In spite of the growing demand for gated communities, these types of developments have become a contentious issue in Barbados.

Gated communities have raised social and spatial concerns both internationally and locally. One Barbadian political activist states that “we associate those gated communities with the bad old colonial days of racial segregation and oppression and we have put those days behind us. But now we seem to be going back to those bad old colonial days where gated communities are concerned” (Bradshaw, 2006, online). A real estate agent states that “Barbados was too small to accommodate such exclusivity” (Ibid). In this research I sought to understand the physical changes that gated developments have made to the Barbadian landscape. Gated communities change the cultural characteristics which the Caribbean, and in particular Barbados, has come to accept as part of its cultural heritage: for example the chattel house, other traditional housing forms village and tenantry patterns that are customarily found in rural and suburban areas. Gated communities have introduced low to medium rise developments with homogenous styles of architecture that are usually associated with tourism development into inland areas, thus changing the physical character of the wider community. This paper examines how three gated developments relate spatially and physically to the wider Barbadian landscape and to the neighbouring non-gated communities through the analysis of aerial photographs, interviews and empirical research.

Evolution of gated communities

In ancient times walls and gates were used to enclose various settlements such as the cities of the Mesopotamian region, ancient Greek cities and medieval towns in Europe. Walls in those times were constructed for reasons such as the protection of valuable resources and as a defense mechanism against neighboring civilizations and nomads. Behind these walls members of these communities had access to various amenities such as temples, community meeting places, recreational spaces and baths (Morris, 1994). In modern times walls, gates and fences are being used to enclave residential communities giving rise to a new housing form known as the gated community. A gated community can be described as a *walled or fenced residential development that restricts public access through the use of security devices or security personnel and that has shared amenities*. Gated communities have become a global phenomenon. Examples can be found in the United States (Blakely and Snyder, 1997), South Africa, South America, the Middle East, Southeast Asia, Canada, Europe, Australia, New Zealand, the United Kingdom (Blandy et

al, 2003) and in the Caribbean Islands of the Bahamas (Gonzalez, 2000), Jamaica (Ellington, 2009), Puerto Rico and Trinidad (Mycoo, 2006).

Typology of gated communities

Blakely and Snyder (1997) identified three categories of gated communities: lifestyle communities, prestige communities and security-zone communities. The three categories are based on the objectives of residents or developers, income level, amenities, aesthetic control, location in the region and different physical characteristics. In practice a gated community consists of a combination of features from the three categories identified. Grant and Mittelsteadt (2004, 915) outline the main features of Blakely and Snyder's typology of gated communities as seen in Table 1.

Table 1 Types of gated communities (Grant and Mittelsteadt, 2004, 915)

Type	Feature	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
			restricted public access in inner city area to limit crime or traffic
		Suburban perch	closed access to some streets to limit through traffic
		Barricade perch	

Lifestyle communities

Lifestyle communities are found all across the United States; however, they are most common in the Sunbelt regions (Florida, California, Arizona, New Mexico and Texas). They provide security, shared amenities and services and leisure activities with recreational facilities (such as golf, tennis and retirement leisure). There are three subcategories of lifestyle communities: the retirement community; the golf and leisure community; and the suburban new town. Sense of community in lifestyle developments is created by developers through common interest and activities. Suburban gated new town developments are mainly large scale master planned projects that comprise hundreds to thousands of dwelling units and a mixture of retail, commercial, industrial and institutional facilities (Grant and Mittelsteadt, 2004).

Prestige communities

Prestige communities, also referred to as elite communities, are the fastest growing of the three categories of gated developments (Blakely, 2007). Prestige communities mainly cater to the wealthy in society. The motivation for using gates is to show status, to protect residents' investment, and to maintain housing and property values. In contrast with lifestyle communities, prestige communities lack leisure activities and facilities. However, developers emphasize aesthetics with the use of elaborate entrances, boundary treatments, and well maintained and manicured landscape.

Prestige communities include developments for the top fifth, the very affluent and the executive communities for the middle class (Blakely and Snyder, 1997). 'Top-fifth' developments mainly cater to high earning professionals and business people who wish to live among others like themselves. Residents favour homogeneity, privacy and exclusivity which are achieved through heightened security measures. Executive communities are smaller than the 'top-fifth' developments and are similar to the standard middle-class subdivision. They differ from 'top-fifth' projects in that they show less emphasis on security.

Security-zone communities

In security-zone communities the gates, walls and fences are erected by the residents rather than by the developer. Residents in all communities focus on protecting their properties and maintaining property values, minimizing intruders and limiting thoroughfare. Residents may erect barriers to prevent persons from entering the community indiscriminately. However, when this action fails to deter outsiders, the local authorities are usually called upon to address the problem. In addition, when nonresidents are prevented from using these roads, the problem of traffic congestion becomes apparent in the surrounding areas. Blakely and Snyder identify three sub categories of security-zone communities, which include 'city perch', 'suburban perch' and 'barricade perch'. 'City perches' are enclosed urban districts where residents use barriers to protect themselves from crime and traffic, given that traffic is a major concern in these areas (Grant and Mittelsteadt, 2004).

'Suburban perches' are a new and growing phenomenon. Similar to city perches, gates are used to deter crime and to restrict pedestrian and vehicular traffic. 'Barricade

perches' are the fastest-growing type of the three security-zone categories. These communities are not completely enclosed and not all entrances are equipped with gates. Streets, however, are closed off using barricades which create a suburban cul-de-sac street pattern out of the city's grid layout (Grant and Mittelsteadt, 2004, Blakely and Snyder, 1997).

In addition to outlining the three types of gated communities, Grant and Mittelsteadt (2004) further analyze four main features of Blakely and Snyder's model. They suggest that other factors and functions help to distinguish the type of gating. They identify the four features outlined in the Blakely and Snyder model which include 1) function of enclosure, 2) security features and barriers, 3) amenities and facilities included, and 4) types of residents. Grant and Mittelsteadt added four other features: 5) tenure, 6) location, 7) size, and 8) policy context. They suggest that these features can be used as a checklist for case studies on gated communities.

Table 2 Checklist of features defining gated communities. (Grant and Mittelsteadt, 2004, 918)

Table 2. Checklist of features defining gated communities.				
Function of enclosure	physical	economic	social	symbolic
	secure people and property create identity for project <i>nature of boundary</i>	enhance property values protect club amenities	give visual or spatial privacy control those inside physical	display status and power control those outside symbolic
Security features	wall	fence --- opaque	fence -- visually open	fence --electric
	low fence, chain, or bollard	fence -- barbed	speed bumps or chicanes	pavement texture or colour
	faux guard station	mirrored glass on guard house	"private property' signs	no parking' signs
	hedge or vegetation	topographic feature	water	desert
	swing-arm gate	lift-arm gate	slide gate	swing gate
	<i>nature of security</i>		devices in road bed	guards at designated times code entry
	guards at all times	patrolling guards	card entry	code entry
	auto opener entry	surveillance camera	armed guards	house alarms
Amenities and facilities	private roads	meeting place	activity centre	recreational facilities
	open space	landscape maintenance	quality design	commercial

	institutional facilities	guards		
Type of resident	homogeneous by age	homogeneous by class	homogeneous by ethnicity race, status	shared activity (for example, golf)
Tenure	principal residence	secondary residence	seasonal residence	public housing
	fee simple ownership	condominium ownership	land lease	rental
Location	urban infill	suburban greenfield	exurban resort destination	rural inner-city
Size	cul-de-sac pod	neighbourhood (tens to hundreds of units)	village hundreds of units, some commercial)	town (thousands of units and mix of uses)
Policy context	restricts gating	enables gating	growing area	stable or declining area

Issues associated with gated communities

The growth of gated communities has sparked an on-going international debate among scholars regarding the social, spatial, and planning implications. Scholars have articulated their views on the topic and discussed the issues associated with gated communities in various books and articles. Some scholars have conducted studies to illustrate the impact of the gated phenomenon on the urban landscape and to discuss the planning and policy implications (Blandy et al. 2003).

Safety and Security

One of the many issues associated with gated communities is safety and security. Residents are motivated to move into gated communities as a result of their desire for safety, security, sense of community and fear of others (Low, 2003, 9). This has brought about the argument as to whether gates reduce crime and the concept of residents' perception of safety. Some researchers contend that barriers do not reduce crime rates (Blakely and Snyder, 1997) while others have reported a significant decline in certain types of crime (Wilson-Doenges, 2000, Atlas and Le Blanc, 1994). Behind the walls and gates, residents' fear of crime may be lessened giving them a sense of security. Even though barriers allow residents to protect themselves from crime, traffic and non-residents, barriers do not protect people from serious criminals (Barons, 1998). Further the use of barriers reflects poorly on the neighbourhood. Gates may project the image of an unsafe society which increases the level of distrust among residents; as a result, people continue to isolate themselves from the wider community.

Sense of community

Another issue arising from the gated community debate is sense of community. McMillan and Chavis define sense of community as "a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members' needs will be met through their commitment to be together" (McMillan and Chavis, 1986, 10). They propose that sense of community has four elements: 1)

membership, 2) influence, 3) integration and fulfillment of needs, and 4) shared emotional connection. Membership suggests that people feel a sense of belonging when they are among others who are of the same socio-economic group and have common interests, lifestyles and values. Influence implies that members feel a part of their community when they are given the opportunity to contribute to the decision making process. Residents are further encouraged to play an active role when other members join together to achieve a common goal. The third element is reinforcement: integration and fulfillment of needs. In gated communities members invest and contribute financially to be part of the community; however, they feel a sense of contentment when their needs are met. This further strengthens their involvement in the community. Finally, the fourth element is shared emotional connection: members of a community will identify with each other and live in cohesion given that they live, interact and share common spaces with others who have a similar background.

Even though developers of gated communities sell the idea of ‘community’ to potential homeowners, researchers have indicated that there is a decline in ‘sense of community’ in these types of communities Blakely and Snyder, 1997, Wilson-Doenges, 2003). Wilson-Doenges (2003) contends that the decline in ‘sense of community’ is derived from residents’ intolerance to diversity. Wilson-Doenges states that, “this intolerance leads to fear, stereotyping, and blame, all of which erode sense of community” (Wilson-Doenges, 2003, 598). Blakely and Snyder (1997) further indicated that residents are not concerned with being involved or interacting with their neighbours. Enclave residents are concerned with living in a controlled environment where individuals share their interests, lifestyles and income levels (Wilson-Doenges, 2003).

Social exclusion and segregation

Social exclusion is one of the social implications of gated communities and is the subject of much debate among scholars. In urban planning one of the main goals is to promote and achieve social integration. This, however, has been difficult to achieve since affluent residents may seek refuge in gated communities. Grant points out that, “some planners worry that gating can lead to social isolation, segregation, and fear. ... Gated communities are the result of social decay. ...In summary, they defeat the purpose of community planning” (Grant, 2003, 7). Gated communities do not only offer exclusivity and privacy; they allow affluent residents to isolate themselves from disruptions, intrusions and unwanted encounters from the surrounding communities. Atkinson and Flint refer to this as time-space trajectories of segregation. They state that “time-space trajectories of segregation can thereby be seen as closed linkages between key fields, such as work and home, which enable social distance to be maintained and perceived risks to be managed by elite social groups” (Atkinson and Flint, 2004, 1). In essence gated communities exacerbate the social divide that already exists in society. The effects of this can be clearly seen in education and employment, especially in areas where poorer social groups reside (Atkinson and Blandy, 2005, 180, Greenstein et al, 2000).

Urban fragmentation and segregation

The advent of gated communities has significant spatial implications on the urban landscape. This is the case since these projects feature private streets and employ barriers that isolate them from the wider community and disrupt the existing spatial networks

(Landman, 2000). Gated developments fragment the urban landscape and disrupt physical connectivity of the surrounding areas. Burke and Sebaly report that, “the impact of walls and gates on connectivity are delivered not necessarily to the residents of the gated communities themselves, but that impacts are instead foisted onto their immediate neighbours” (Burke and Sebaly, 2001, 69). The impermeability of these communities forces pedestrians, cyclists, and motorists to navigate around them or take alternate routes to their respective destinations (Grant and Curran, 2007). Navigating around these enclosed communities also increases travel times for others. Another concern with private streets and gated developments is the issue of accessibility. When gated communities are constructed near public spaces, this becomes problematic, since developers construct their property either on or immediately adjacent to areas customarily used by the general public. Grant and Curran (2007, 745) recognize this and state that “some arrange themselves to cut off outsider access to public places, like beaches or lakefront land.”

Public transportation is a major component of the transportation system in urban areas. Many municipalities provide this mode of transportation as a means for residents to connect to neighbourhoods in the city and outside the urban fringe. Grant and Curran (2007) point out that due to the nature of private streets, with their narrow widths, lack of connections to other neighbourhoods and small number of residential units, it is unlikely that public transit will travel those areas where private streets occur. Furthermore, public transit is not common in these areas because they tend to be very vehicular oriented.

In some countries with planned growth, metropolitan areas were laid out in a grid form; rectangular blocks were divided by straight streets that ran perpendicular to each other. Over the years, however, this form has been changed by developers through the use of private streets to accommodate gated developments. Grant and Curran (2007) points out that private streets not only fragment the urban landscape, they increase the size of city blocks.

Over the years many metropolitan areas have experienced significant population growth due to an influx of immigrants. This has created problems which include a densely populated area, an increase in social diversity and a wider underprivileged class. These new variables have seen changes which have lowered the standards of the community. Blakely and Snyder further observe that, “along with these demographic changes there is growing poverty and significant dislocation caused by a restructuring economy. Suburbanization has transformed our metro regions with center cities losing their place as the center of culture and business. But the suburbs are also changing. In metro areas poverty and economic inequality are no longer limited to the inner cities” (Blakely and Snyder, 1997, 146).

Urban Planning and management

Social and physical implications of gated communities are not the only areas to consider. Gated communities raise many urban planning and management issues for planners. These include roads, traffic flow, public safety, services and general urban maintenance. It should be noted that local authorities or municipalities are normally responsible for these issues; however, in gated developments the homeowners’ association assumes responsibility for servicing and maintaining private roads and amenities. Private roads are a common feature of gated developments. Even though the use of these roads is restricted to residents, municipalities tend to favour private roads, since municipalities can

relinquish responsibility for servicing and maintaining private roads to developers (Curran and Grant, 2006). Another issue is that some municipalities do not require strict adherence to the building standards when private roads are built. This has resulted in some private roads being built below the standard dimensions for a right-of-way on public roads. Other municipalities mandate that private roads be built to the dimensions outlined for public roads and should be built to accommodate emergency service vehicles. Curran and Grant (2006) note that in some places no policies/laws force developers to maintain roads; without appropriate policy, problems such as the improper servicing of roads and the deterioration of road quality can result.

Given that gated communities use physical barriers and control access to prohibit through-traffic, they have created some concerns for municipalities. These restrictive measures alter traffic flow, hinder police patrols and delay the response times of emergency and police vehicles (Blakely and Snyder, 1997). Gated communities are a form of privatization that transforms public space to private space. In this private realm home owners' associations are responsible for providing civic goods and services for residents. This transition from public to private has reintroduced a debate that originated with Howard's Garden City proposal. The Garden City concept was introduced during the 19th century by Ebenezer Howard. The concept involved a new approach to urban planning; Howard "proposed the idea of a proprietary community, funded by private investment capital and managed by a 19th-century version of a community association" (Webster et al. 2002, 316). Webster contends that "the 'public-private realm' debate has resurfaced a century later, arguably for similar reasons. Private residential communities (cooperatives, homeowners' associations and condominiums), retail communities (including leisure complexes) and industrial communities (industrial parks) are all forms of private municipal governance. They all supply civic goods (protection, cleanliness, environmental improvements and so on) privately via some form of user payment" (Webster, 2001: 153).

Financial benefits and implications

Gated communities offer financial benefits to homeowners, developers and municipalities. At the same time they do have some financial implications for the homeowners and the urban economy. Residents not only focus on safety and security of gated communities, they recognise them as a lucrative investment due to the financial potential of the property. Some researchers contend that gates add and maintain value to residential development (Bible and Hsieh 2001, Baron, 1998), while others have tried to examine whether houses in gated communities are valued higher than those in non-gated communities (Blakely and Snyder 1997). Blakely and Snyder conducted a five year long survey in Orange Country to explore this theory. They reported no significant variations in price and eventually concluded that "gates cannot be assumed to increase value or maintain it" (Blakely and Snyder 1997, 18).

Developers may become involved in gated projects in an effort to maximise land use on small parcels of land. In these projects developers are able to provide higher density housing that normally generates faster sales. These two variables allow developers to achieve and maintain higher profit margins (McKenzie, 2003).

Municipalities enjoy some financial benefits from gated communities. Even though municipalities relinquish some responsibility to homeowners associations they seek to gain

property tax revenue from residents in gated developments. As McKenzie states, “local governments seek growth and increased tax revenues with minimal public expenditure” (McKenzie, 2003, pg4).

Double taxation is one of the financial implications of gated communities. Homeowners are required to either pay monthly or annual fees to their homeowners’ association and taxes to their municipal government even though they may not receive civic goods and services from local authorities. One of the main goals of urban planners is to achieve urban sustainability. However, the growth of gated communities has made it challenging for planners to achieve this goal. The three main characteristics of urban sustainability are 1) social, 2) economical and 3) environmental equity. However, the focus here is on economic equity which involves the development and fair distribution of goods, services and natural resources. Landman argues that private governance has a significant impact on the fair distribution of good and services and urban economic sustainability (Landman, 2000).

Gated communities in the Caribbean

To date there is a substantial amount of literature on gated communities. However, little is published on gated developments in the Caribbean. Nevertheless, the little work published reveals that gated communities are not new to the Caribbean. As Blakely and Snyder state “walled and gated military settlements were also built in the New World with the earliest being the Spanish fort towns in the Caribbean” (Blakely and Snyder, 1997, pg 4). The first residential gated community communities appeared in the mid 1990s. Mycoo (2006) notes that gated communities appeared in Latin America and the Caribbean during a period of economic hardship known as the post-structural adjustment era. During this time countries in these regions were experiencing marginal economic growth. In the Caribbean, examples of these types of communities can be found in Jamaica, Puerto Rico, Haiti, Trinidad, the Bahamas and Barbados.

Middle and upper class residents in the Caribbean are motivated to live in gated communities for reasons similar to those residents in North America: namely the fear of crime, the desire to control their own environment, and an interest in private governance. However, the growth of gated communities in the Caribbean can be further attributed to imported lifestyles from North America, influence of globalization on privatization and economic growth, desire for global capital and a growing leisure class (Mycoo, 2006, Bunce, 2007). Bunce contends that Caribbean islands are a leisure region that attracts mass tourism. In their effort to pursue the leisure class, Caribbean islands are seeking to diversify their tourism market by providing more long term up-scale tourism (such as upscale residential communities or resort communities found inland and coastal areas) (Bunce, 2007, 970).

Countries such as the Bahamas and Barbados are witnessing these types of changes which have a significant impact on the physical, cultural and historical landscape. The Bahamian government encourages luxury developments, most notably resort and luxury communities, for monetary gain and the new job opportunities associated with them (Gonzalez, 2000). In spite of the economic advantages luxury developments offer many Caribbean islands, they are met with some resentment, especially by locals. These

developments prevent locals from engaging in cultural traditions and may damage environmentally sensitive areas. This has prompted local residents and other advocates to join together to protect the country's traditions, historical sites and natural environment, especially in coastal areas.

In countries such as Trinidad, the upper and middle classes are opting to live in gated communities because of government's failure to address problems with rising unemployment, crime, inequality and poverty. As result of government's failure to handle these social issues the upper and middle class have sought to privatize services (such as water, health, education and security) normally provided by the government (Mycoo, 2006).

Purpose of Study

The purpose of this research is to examine how gated communities relate spatially and physically to the wider community; it will compare them to non-gated communities, using Community A, B, and C as case studies.

The study has four objectives:

1. To gain an understanding of the issues associated with these types of developments.
2. To contribute to general knowledge about gated communities in Barbados.
3. To show how gated developments relate spatially and physically to the wider Barbadian landscape and to the neighbouring non-gated communities.
4. To suggest areas for future research on gated communities in Barbados.

Gated communities in Barbados



Figure 1 Location Map: Barbados (Google Earth, 2009)

Barbados has a land mass of 166 square miles. It is one of the smallest and most easterly of the Caribbean islands (see Figure 1). It has a population of 268,792 (2000 census). The island has a tropical climate with summer-like conditions year round. Barbados is relatively flat, rising gently from the west coast in a series of terraces to a central ridge. It has access to first class telecommunications and infrastructure, free education to the tertiary level, a good health care system, and a stable democratic political system and economy. Barbados is one of many islands that have seen a steady increase of gated communities since the early 1990s.

After Barbados was colonized by England, land was mainly used for the production of sugar cane. However, due to problems in the sugar industry (including low sugar prices, low rainfall and long dry periods), many plantations were fragmented or abandoned. Abandoned plantation estates were initially subdivided into small farming units but later divided for commercial development, residential subdivision and resort development. Bunce (2007) sees this transformation of land uses as a shift from landscapes of production to landscapes of consumption.

The subdivision of land in Barbados first began in the 19th Century. Nurse reports that, "the first real subdivisions apparently occurred after emancipation, with the rise of villages which grew up in clusters on rab lands where soils were poor. At this time there was also the creation of plantation tenancies and the growth of a peasant farming class" (Nurse, 1979, 9). This settlement pattern (the subdivision of land into of villages and tenancies) has shaped the physical landscape that we see in Barbados today; gated communities are gradually becoming part of the settlement pattern.

Barbados has seen a growth in gated communities. The growth in part reflects government's effort to sustain and develop the economy through privatization and foreign investment. One political leader and his colleagues "have encouraged wealthy investors to believe that Barbadians are so indebted to them for their investment in Barbados that they are entitled to exclusive and privileged treatment" (PEP Column, 2007, 10). This political leader has told expatriates that "there is nothing wrong with you being rich or living in gated communities away from rank and file Barbadians...the future of Barbados is tied up with your investment in this country and we need you, honest we do" (Ibid). In the effort to encourage foreign investment the government made provisions for non-nationals to purchase and own land in Barbados. To this end the Property Transfer Tax of 10% was removed. This policy helped to open up the country's economy to foreign capital/investment especially in the real estate sector, hence allowing the luxury market and private residential development to flourish.



Figure 2 Gated communities in Barbados

In Barbados gated projects reflect a mixture of lifestyle communities (such as yacht, golf and polo), and prestige communities. These lifestyle and prestige communities combine luxury apartments, condominiums, townhouses or individual homes. According to a real estate agent (interview 2009) the units are owned, occupied or rented by local elites and expatriates. People acquire the units either as a form of investment or as a holiday home to escape cold winters. Most tenants

Gated communities started to appear in the Barbadian landscape since the early 1990s. A conversation with an architect revealed that the first gated community appeared in Barbados in 1993, with the construction of Royal Westmoreland which is one of the largest gated communities on the island. It comprises villas, apartments, a golf course and a Beach Club. In my efforts to locate other gated communities I searched several real estate websites to create a list of existing projects. Subsequently I used the list to locate the projects that met the definition of a gated community.¹ My survey of the island conducted in 2009 revealed that to date Barbados has at least twenty-six gated communities, located mainly in areas with major tourism development (such as hotels, guest houses and restaurants) and in some central parishes. The data collected during the survey is mapped in Figure 2. Other gated communities under construction are scheduled to be marketed in the near future.

¹ A gated community is described as a *walled or fenced residential development that restricts public access through the use of security devices or security personnel and that has shared amenities.*

are from other countries (e.g. United Kingdom, Canada, United States, India, Antigua, Trinidad and Jamaica) who either work or vacation in Barbados.

Barbados has no policies or regulations for gated developments. The local planning authority, the Town and Country Development Planning Office, does not distinguish between open and gated communities. As a result developers have an opportunity and freedom to design and construct gated developments once they comply with the required setbacks, building heights and settlement policies (which are outlined in The Applicant's Handbook and the Physical Development Plan). The Physical Development Plan, produced by the Ministry of Health and the Environment and Town and Country Development Planning Office, is "intended to provide a vision for the future growth and development of the nation by setting out policies to guide relationships among land uses, community facilities and physical infrastructure" (Government of Barbados, 2003: 1-1). This document is used to curb the suburban style of residential development that has a negative impact on the quality of the rural landscape and in some instances agricultural practices. The Land Use Map identifies all existing rural settlements areas. "The boundaries of the designation are general and are intended to identify the approximate limits of developed settlement area. The purpose of this designation is to: allow for new incremental growth through limited infilling and small scale extensions to the existing settlement areas, where appropriate" (Government of Barbados, 2003: 3-38).

CHAPTER TWO

METHOD

Gated communities are appearing in many parts of Barbados. This growth is influenced by the country's continuous development. A continuing debate in various forums reveals objections to the effect gated communities will have on Barbados' cultural and social systems. Many residents stated their opinions on the "call-in" radio programmes. Citizens made statements such as "the Government is selling the birth-right of the citizens to foreigners" (Nation News, 2009). Clearly gated communities are meeting some resistance. For this reason I first sought to gather information for this thesis.

In order to understand and gather information on gated communities internationally and in the Caribbean, I used the internet, Google Scholar, Google Books and the Dalhousie University Subject LibGuides to source journal articles, theses and books on the topic. I further searched each source to locate additional publications on gated communities. The searches revealed that the gated phenomenon is well documented in the United States and material on the topic is being published in other parts of the world. Several documents indicated the various issues associated with gated communities which fall into three categories: social, spatial and planning. To understand trends in Barbados I read articles and features in the Barbados Advocate and the Nation Newspaper to gain a perspective on gated communities on the island.

After reviewing these sources I sought to explore why the North America gated culture had caught on in Barbados and to determine what motivated residents to move into a gated community. My intention was to understand the sense of community that develops in a gated community, using 'Community A' as a case study. This idea drew on Rachael Bes Goldberg's master thesis which sought to understand "what motivates or influences residents to move into Glen Oaks Residential Community in West Des Moines, Iowa and is there a greater sense of place created because of the gates?" (Goldberg, 2006, 47). The data for Goldberg's research was collected using email surveys sent out to a sample population. In an effort to evaluate the sense of community, Goldberg administered David Chavis' "Sense of Community Index I" to the sample population and residents in non-gated communities surrounding Glen Oaks Residential Community. In my attempt to gather such data I proposed to conduct three focus groups, each consisting of eight residents. In an effort to evaluate David Chavis (2008) "Sense of Community Index II", I intended to use a revised version of the "Sense of Community Index I" for residents in the focus group.

My attempts to recruit participants met great difficulty and resistance from the Board of Directors of the homeowners' associations and owners of gated housing projects. Although I formally introduced myself and was transparent by giving all the methods and other ways my research was to be conducted, I was bluntly refused permission to talk with residents. The Chairman and the Board feared that the information might have negative repercussions for the community and its residents. In another instance the Board of Directors of a community did not reply to my request. I also made attempts to contact residents individually; however, due to the unavailability of residents' contact information I was unsuccessful. After incurring these road blocks I reconsidered my approach. At that

time I decided to embark on an investigation that illustrated the spatial and physical relationship of gated communities to the wider community by utilizing observational and mapping techniques.

Site visits, Observations and Mapping

Prior to committing myself to the three gated communities in the case study, I consulted several real estate websites to determine the location, number, and type of gated communities on the island. I then proceeded to drive around the island to verify their location and to ascertain whether they met my description of a gated community. The three communities I focused on were chosen because they represented a typical lifestyle and prestige community, their unique locations. For instance 'Community A' is a beachfront, marine community which is located near the second largest town on the island, a resort, a fishing village and other residential communities. 'Community B' is located in the most central parish on the island near the Warrens area, which is one of the fastest growing suburban centers in Barbados. It is completely surrounded by several pre-existing residential communities. 'Community C', is located on a cliff surrounded by a residential community which caters to low income residents. In an attempt to determine the physical differences among gated communities and non-gated communities I made several site visits to 'Community A' (in St. Peter), 'Community B' (in St. Thomas), 'Community C' (in St. Michael) and the non-gated communities which surrounded them. Throughout this paper these communities are referred to as Community A, B, and C to protect the confidentiality of developers and managers involved in these projects. As part of the observation method I focused on features such as size, layout, density, architectural features, boundary treatment, accessibility, security features, street patterns, type of residents, and travel behaviour of pedestrians, public transportation and private vehicles.

Each community was visited and revisited every other day during a three week period to gather data and to photograph the characteristics and features. This information is itemized in Table 1 (see Appendix A). In my attempt to understand physical connectivity I observed the travel behaviour of pedestrians, private vehicles and public transportation to and from the gated communities and the non-gated communities. I took observations near the entrances of these communities during the morning and evening rush hours, for a period of one week. Each day I spent two hours in the morning and two hours in the evening documenting the number of persons and cars that exited as well as those which passed through the community within the hour en-route to other destinations. I chose these hours because of the level of activity that occurs during this time. Additionally, I noted the direction pedestrians and vehicles used when leaving and maneuvering around the outskirts of the community. This information was entered in a travel diary, with date and time. Subsequently I illustrated these travel patterns on maps of the respective study areas. In an effort to document the movement of public transportation I made direct observations around the communities. I consulted the government owned Barbados Transport Board website to gather information on the bus routes that pass within the vicinity of the communities, and schedules associated with this mode of transportation.

To assist with the mapping exercise I used satellite images from Google Earth and 1991 and 2006 aerial photographs obtained from the Lands and Survey Department. These images and photographs show the land use prior to the development of the gated communities and the location of the three study areas. These items were subsequently used

to map the non-gated communities immediately surrounding each gated community and to locate the commercial centers, business centers, institutional uses and recreational spaces within a 1 ½ mile radius of the specified gated community. I made note of the movement of pedestrians, vehicles and public transportation. The information gathered through the observation process was transcribed, analyzed and is presented in Chapter Three.

Some of the data in Table 2 could not be collected through direct observation. I consulted the Barbados Statistical Department for information on nationalities of residents. In addition, I interviewed three representatives associated with the gated communities, a town planning consultant and real estate agents. In an effort to locate and contact these individuals for an interview I used the Google search engine and the local directory to obtain contact information. Each respondent was contacted by telephone and then I emailed a letter outlining the details of my research. I intended to conduct the interviews in person; however, due to the limited availability of representatives, some interviews were conducted in person and others via email. Those interviews conducted in person were semi-structured; this allowed me to request additional information where necessary. All interviews consisted of a series of open-ended questions. In some instances examples were given to probe for further details. The interview comprised of questions originally used in a gated community study conducted by Grant in 2003 and some I have formulated. The information collected during the interviews was transcribed, and is presented in Chapter Three.

Strengths and Limitations

The advantage of using direct observation is that it allowed me to collect my data without interference from outside sources. For instance I did not have to wait or rely on residents or professionals to supply most of the information. Direct observation also gave me an opportunity to revisit and spend an unlimited amount of time to ensure all the physical attributes of each study area were well documented. Furthermore having access to aerial photographs and satellite images helped me to understand and illustrate how each gated community fit into the rural landscape and related to the surrounding area. Using these images helped to confirm the spatial and settlement patterns seen during the observation process. Interviews with various professionals helped to answer questions on gated developments in Barbados, which observation techniques could not answer or explain. There were some limitations to some of the methods used. For instance emailing the surveys created a challenge in that it did not give me the opportunity to immediately clarify questions respondents had and to clarify answers respondents gave to some questions. Using this method did not allow me to probe for more in depth answers. The main limitation with the mapping exercise was that satellite images and aerial photographs were not up to date and did not reflect the most current land uses. This made it challenging to illustrate development patterns given that new residential and commercial developments were constructed since the photo and images were taken. The next chapter presents my research results.

CHAPTER THREE

RESULTS AND DATA ANALYSIS

In the past few years new gated communities are increasingly becoming part of the settlement pattern. During my survey of the island in 2009 I discovered that small and large scale gated developments appear among residential, commercial and resort developments along the west and south coast and in rural/suburban areas (see Figure 3). Based on the number of gated communities identified in the driving survey I found that eighty percent of the communities are located within 2km of the coast. Figure 3 shows two set of clusters along the west and a cluster on the south coast. It is apparent that these developments are taking advantage of the beach amenity. Most of the gated communities located inland are situated on elevated areas which allow them to take advantage of the visual amenities. At these locations they have unobstructed views of the ocean and the Barbadian landscape.



The gated communities identified in the survey include Royal Westmoreland Golf and Country Club (in St. James), Port St. Charles Marina (in St. Peter), South Ocean Villas (in Christ Church), Gunsite (in St. Michael), Millennium Heights (in St. Thomas), and Crystal Court and Clermont Green, (both in St. James). Based on the features, characteristics, and amenities offered, most of these communities represent the lifestyle and prestige communities that Blakely and Snyder (1997) refer to in their typology. The gated communities have different styles of housing (namely villas, townhouses, duplexes, condominiums and luxury apartments). Most gated projects on the island are small developments generally consisting at least thirty dwelling units whereas those centered around leisure activities and amenities are larger and have a few hundred homes with varying architectural styles.

Homes in these projects are available either for sale or long term rental. The prices of the properties can vary as determined by factors such as size of the dwelling, location (beachfront or inland properties with desirable views), type of residential development and amenities offered. For instance newly built three bedroom, 2 ½ bathroom townhouses located in St. James were priced at \$2.6 Million (US) in 2009. A three bedroom penthouse beachfront apartment could be resold for \$40 Million (US). According to information provided by one real estate agent, who specializes in “top-end” luxury market properties,

most gated properties are within the \$3 Million-8 Million (US) range. According to information provided by various developers, some properties have a starting price of \$1,200,000-\$1,400,000 (US). Such properties can be rented for \$2,500.00 (US) to \$4,500.00 (US) per month. Rates may vary depending on the type of community, location and amenities offered. In addition to the purchase price and rental fees, buyers and renters pay a monthly or annual maintenance fee, property taxes and property insurance.

Gated communities attract a cross section of individuals who can include expatriates, retired persons, returning nationals, golfing, polo and yachting enthusiasts and to a lesser extent local elites. Gated developments are targeted mainly to overseas clients. One real estate agent pointed out that residents are attracted to these types of development because of the security features, amenities (golf, tennis, spa, and gym), high-end exterior and interior design, communal management, and maintenance and concierge services (Real estate agent, 2009). The demand for these types of development is driven by market demand which mainly comes from foreign buyers. Foreign buyers are attracted to Barbados for several reasons; for example year round summer-like conditions, and stable political system and economy. According to one real estate website “the year round sunshine, cooling sea breezes, golden beaches, friendly people, vibrant social scene, the ultimate sporting and recreational facilities, first-class telecommunications and infrastructure, world class education and health care and a stable political and economic climate make Barbados a highly desirable destination” (Altman Real Estate, 2009).

The Communities

For this project I have chosen to examine three well established gated developments, in the parishes of St. Thomas, St. Peter, and St. Michael in Barbados. These upscale developments are small to large scale and are examples of the lifestyle and prestigious communities that exist on the island. They occupy land that allows residents to take advantage of picturesque views and proximity to white, sandy beaches. For instance, one development is a prestigious community located on a terrace near one of the fastest growing suburban centers in Barbados. The second is a lifestyle community located along the west coast near the second largest town centre on the island. The third is a prestigious community surrounded by an area which predominantly houses residents in the lower income group. These communities can be seen as infill suburban residential development in that they occur in areas where residential developments already exist. Furthermore, they occur in areas of rapid commercial and residential growth. Even though these communities isolate themselves from the surrounding communities with walls and gates they show no discontinuity in the settlement pattern. In two cases these communities abut the non-gated communities' neighbours; however, in three instances the gated community is separated from its neighbours by a major road or highway.

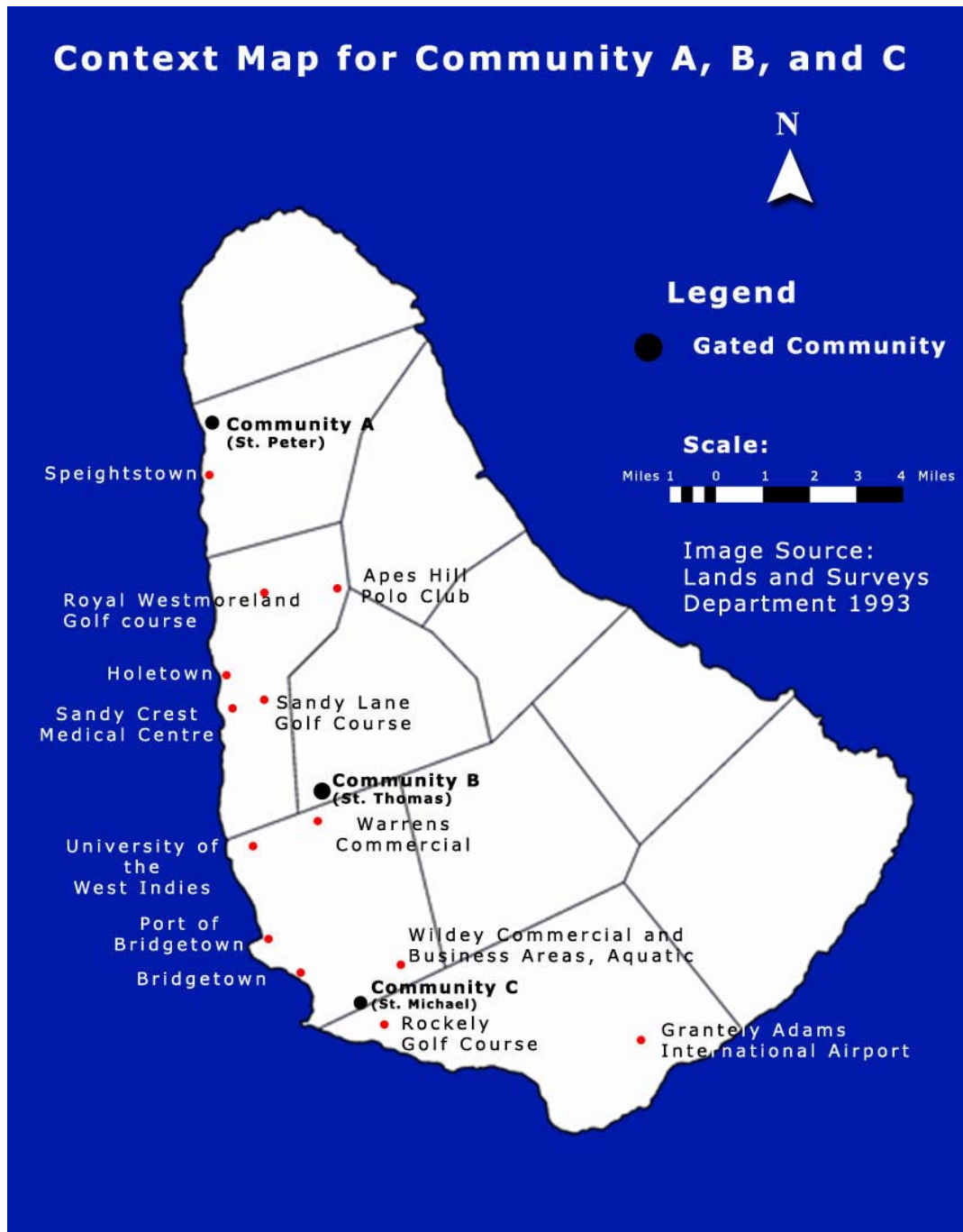


Figure 4 Context Map (Lands and Surveys Department 1993)

Community A



Figure 5 Community A (Google Earth, 2010)

Community A is a planned gated community located on the west coast in the parish of St. Peter, one of the most northern parishes in the island. The construction of this development began in 1996; its 5th and final phase was completed in 2005. Community A occupies twenty-two acres of land along a west coast beach; it encloses ten acres of artificial lagoon. This community offers one hundred and fifty-six units in apartments and townhouses. These units ranged in price from \$795,000.00 to \$5,250,000.00 (US) in 2009; prices vary depending on the location and the size of the unit. Residents incur annual management expenses which range from \$12,085.00 to \$49,000.00: this cost covers common property expenses, property insurance and property tax (Brochure, 2009). Community A offers residents

various amenities such as a yacht club, water taxi, swimming pool, beauty salon, tennis court and exercise room. Residents have direct access to sandy beaches and the calm waters of the Atlantic Ocean. This community is the only exclusive residential marine community in Barbados. Community A is also the second seaport of entry into Barbados (after the Bridgetown Port), and is used mainly by yacht owners. The gated marine community is bounded by a major highway running north-south and it is surrounded by two villages (one north and one southeast), one non-gated residential subdivision and an all inclusive hotel. A non-gated subdivision is immediately opposite Community A and an all inclusive hotel is on the southern side.

These communities are near various services, retail stores and commercial businesses located in the Speightstown Town Centre, approximately two minutes drive away. They are five to thirty-five minutes drive from Holetown (the second town centre in the north), the Holetown Police Station, the City of Bridgetown, the Port of Bridgetown, the Grantley Adams International Airport, the Maurice Byer Polyclinic, the Sandy Crest Medical Centre, the Sandy Lane and Royal Westmoreland Golf courses, the Apes Hill Polo Club and several restaurants (see Figure 4). They are two minutes walk to beaches on the west coast.

Community B



Figure 6 Community B (Lands and Survey Department, 2007)

Community B is a planned, gated community located in St. Thomas, the most central of the eleven parishes on the island. This development was constructed in 1997. It occupies fifteen acres of land situated on a terrace which provides residents with a panoramic view of the St. Michael and St. George valleys. Community B has two phases, both completed. Phase one comprises forty-two townhouses and thirty-six condominiums whereas phase two comprises fifty-one single family lots, twenty duplexes and sixteen condominium units. The units could be bought at an average cost of \$450,000 (US) with a monthly fee of \$563.27 (US) and the price range for rent ranges from \$2,000 to \$4,000 (US) in 2010. The single family lots are sold at an average cost of \$251,000.00 (Seaside Realty Inc., 2010). The community offers various amenities such as a clubhouse, two communal swimming pools, two tennis courts, exercise facilities, children's facilities, a walking trail, a man-made lake and large, open, green areas.

Community B is immediately surrounded by four non-gated residential subdivisions and several small villages. The four subdivisions fringe the northern, southern, and western sides. Two of the subdivisions are separated from Community B by a major highway running in a north-west direction. On its eastern side Community A abuts several small villages.

These communities are ideally located, in that it takes fifteen to twenty minutes or less to reach the City of Bridgetown; the Port of Bridgetown; the Grantley Adams International Airport; the University of the West Indies Cave Hill Campus (the island's only university); the Queen Elizabeth Hospital; Sandy Crest Medical Centre; the Warrens Polyclinic; restaurants and beaches on the west coast; the two oldest town centers, Holetown and Speightstown (located in the Northern part of the island); the commercial business centers in the Warrens area (one of the fastest growing suburban centers on the island); the Sandy Lane and Royal Westmoreland Golf courses (both located in the parish of St. James) and the Apes Hill Polo Club (which is located in Apes Hill, St. James). Additionally, the community is near to the ABC (Adams, Barrow and Cummins) Highway and Ronald Mapp Highway (the two main arteries of Barbados' transportation infrastructure).

Community B is a planned, gated community located in St. Thomas, the most central of the eleven parishes on the island. This development was constructed in 1997. It occupies fifteen acres of land situated on a terrace which provides residents with a panoramic view of the St. Michael and St. George valleys. Community B has two phases, both completed. Phase one comprises forty-two

Community C



Figure 7 Community C (Google Images, 2009)

Community C is a relatively small, gated community of 4.3 acres that opened in 2003. This community is a cul-de-sac pod located along a cliff in St. Michael, the most densely populated parish on the island (2000, census). It comprises thirty-two semi-detached townhouses some of which over look the South Coast and the Atlantic Ocean. The average price for sales and monthly rent in the community are \$400,000.00 and \$1,875.00 respectively (Seaside

Realty Inc., 2010). Community C's only amenity is a swimming pool. At this

location residents have an unobstructed picturesque view of the south coast and the Atlantic Ocean. Community C is immediately surrounded by a village and a government housing area which contrast with the upscale development.

These communities are located five to fifteen minutes drive from the South Coast, which has several restaurants, fast food chains, gas stations and beaches, retail stores, businesses and services centers. Community C is also near the Grantley Adams International Airport, the City of Bridgetown, the Port of Bridgetown, the Queen Elizabeth Hospital, Winston Scott Polyclinic, Garfield Sobers Sports Complex (where tennis, hockey, basketball), the Aquatic Centre (with an Olympic sized swimming pool) and the Wildey business area, which is one of the largest suburban centers in Barbados, (Physical Development Plan, 2003); the Rockley Golf Course (see Figure 4).

Non-gated Communities

The non-gated residential subdivisions and villages surrounding Community A, B and C consist mainly of individually-owned single-detached dwellings and few apartments. The residents in these non-gated communities do not have the amenities which the gated communities offer. Unlike the three gated communities which are of a high density and medium-low rise developments, the non-gated developments are of a lower density with an average of fifty houses and one or two low rise apartments among them.

Spatialities of gated communities

In an effort to understand and illustrate the spatial and physical aspects of the three gated communities I utilised aerial photographs from 1991 and 2006, digital photographs and data collected during my observations. The aerial photographs from 2006 indicated that the three gated communities appear in coastal and suburban areas with significant residential and commercial development. The 1991 aerial photos indicate the location of each community prior to development. They show the site of Community A and B as large greenfields surrounded by residential and commercial development in its infancy (see Figures 8, 10, also see Appendix B for enlarged images). The aerial photographs illustrate

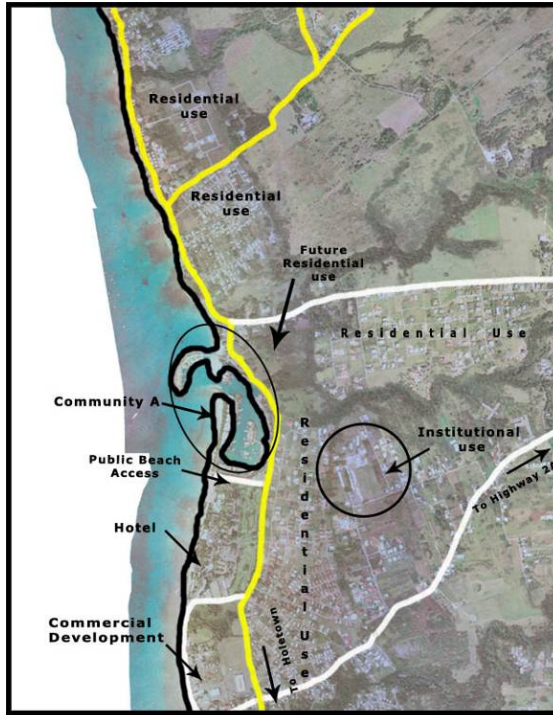
the location of Community C as a greenfield site surrounded by a densely built up residential area (see Figure 12). The maps also indicate that all major infrastructure such as highways and major roads already existed in all three areas.



Scale: NTS
Derived from Lands and Surveys Department digital data. All rights reserved. Government of Barbados 2007.



Figure 8 Land uses around Community A in 1991 (Lands and Surveys Department, 1991)



Scale: NTS
Derived from Lands and Surveys Department digital data. All rights reserved. Government of Barbados 2007.



Figure 9 Land uses around Community A in 2006 (Lands and Surveys Department, 2006)



Figure 10 Land uses around Community B in 1991 (Lands and Survey Department 1991)

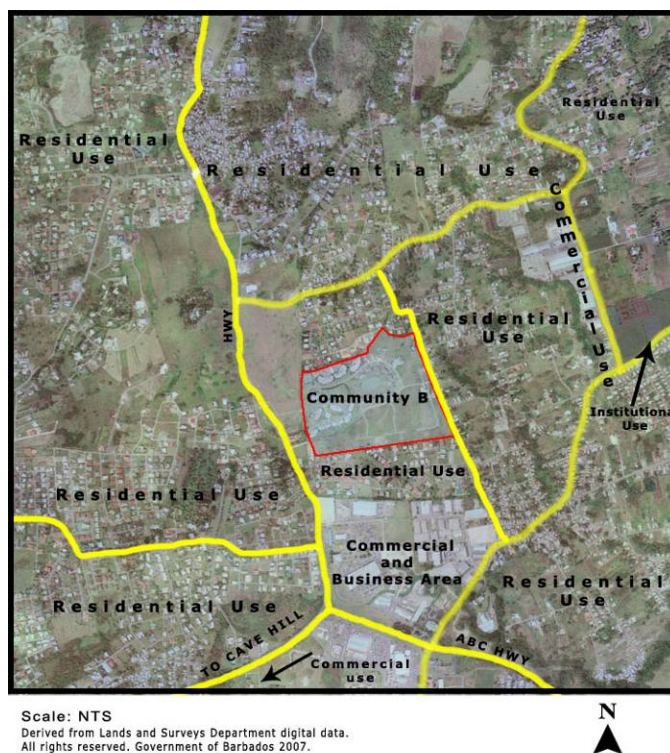


Figure 11 Land uses around Community B in 2006 (Lands and Survey Department, 2007)

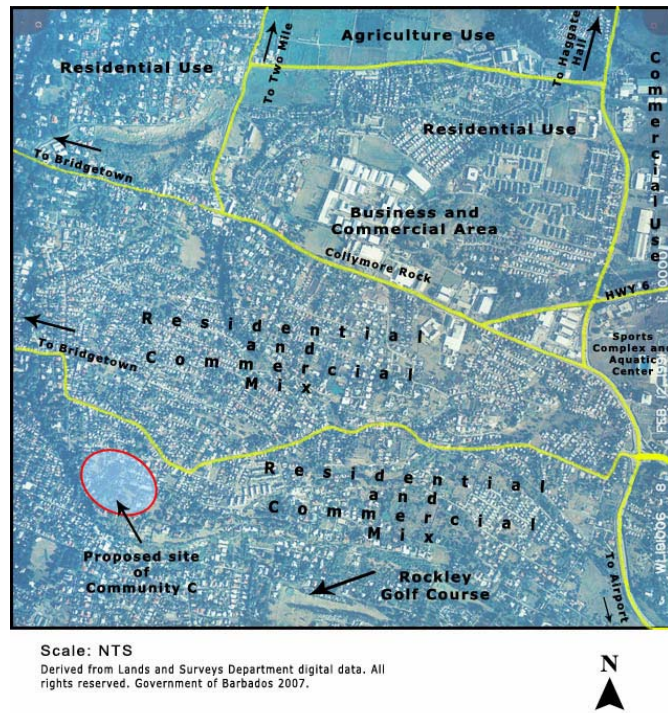


Figure 12 Land uses around Community C in 1991 (Lands and Surveys Department, 1991)

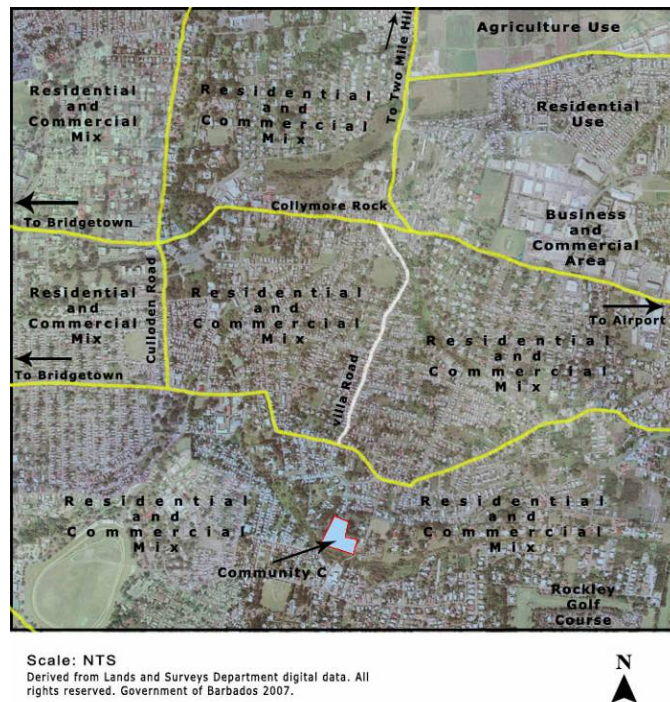


Figure 13 Land uses around Community C in 2006 (Lands and Survey Department, 2007)

When I studied and compared the aerial photographs for Community A and B it is apparent that significant development occurred between 1991 and 2006 (see Figure 8-11, also see Appendix B for enlarge images). The greenfield sites were developed as residential and commercial uses. Aerial photographs for the area surrounding Community

C, for the same period, show no significant change (see Figures 12, 13, also see Appendix B for enlarged images). The aerial photographs not only illustrate a significant change in land use but they indicate major environmental change to the land especially where Community A is concerned. In an effort to create the marina for Community A the land was dredged and a breakwater was constructed to protect the marina and beach.

Grant and Curran (2007) point out that gated residential developments fragment the physical landscape and disrupt connectivity. On reviewing aerial photographs from 1991 and 2006 I found that in contrast to the individual non-gated developments, Community A, B, C occupy large portions of land and use walls and fences to enclose these spaces. This has resulted in the landscape being divided into large sections and has caused the space to be impermeable. Even though walls and fences create an impermeable space, the aerial photographs indicate that connectivity of the surrounding area remains unchanged before and after development. The aerial photographs show that the residents of non-gated communities could access their homes and the surrounding amenities in the same manner and time frame prior to the construction of each gated community (see Figures 16, 17, also see Appendix B for enlarge images). Even though there is no evidence of these communities hindering vehicular and pedestrian connectivity I found that Community A has changed how locals access the beach. Prior to the construction of Community A locals used a path that cut across the property. However, the construction of the development has blocked that access and locals are now restricted to a single beach access between the Community A and the Hotel (see Figure 14, 15). Even though there are no private beaches in Barbados the design of Community A is such that it gives the impression that the beach is private.



Figure 14 New Beach Access (Google Earth, 2010)



Figure 15 Old Beach Access (Lands and Survey Department, 2007)

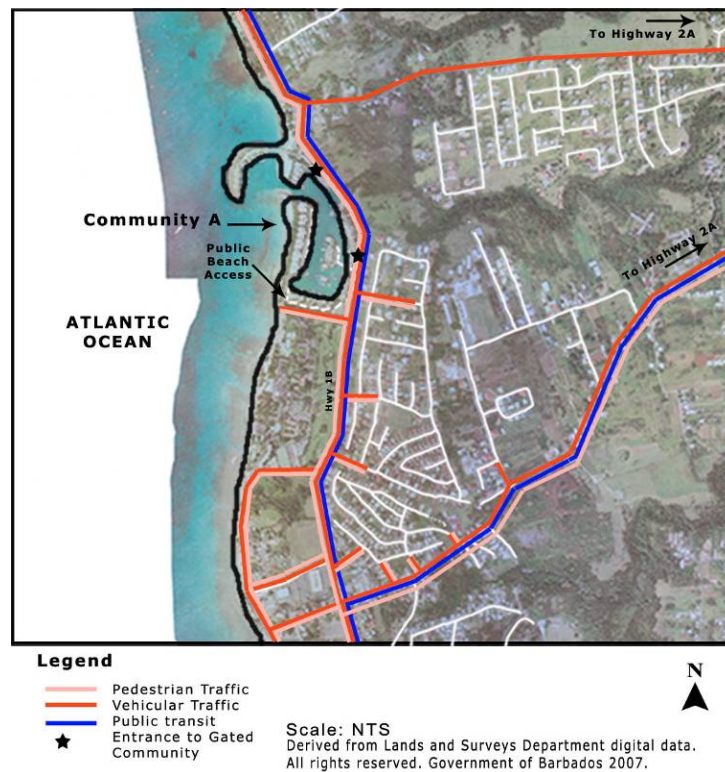


Figure 16 Travel behaviour of pedestrians, vehicles and public transit around Community A

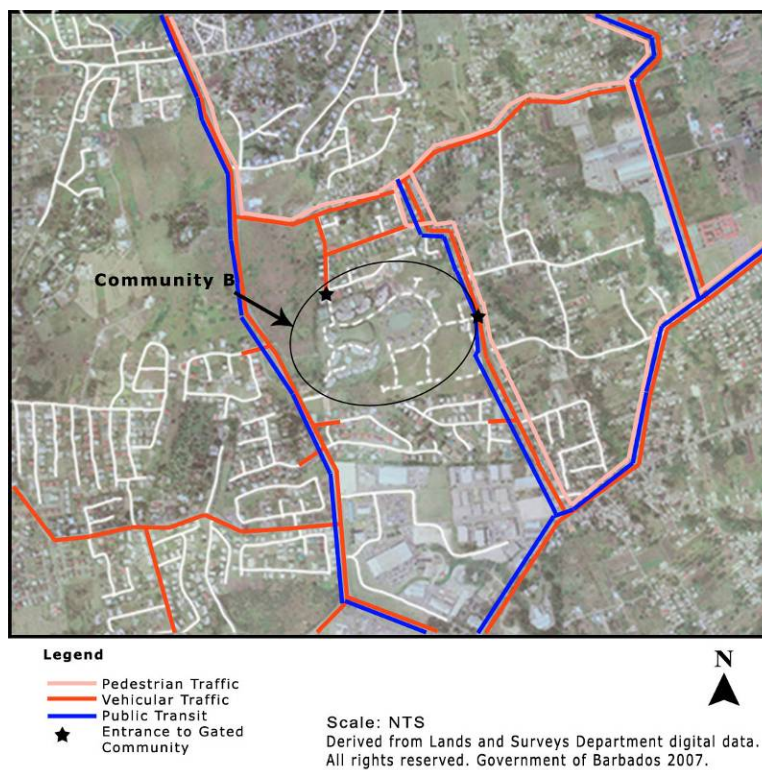


Figure 17 Travel behaviour of pedestrian, vehicle and public transit around Community B

The three communities utilise the existing infrastructure (road networks) to access the entrances of Community A, B and C (hence no major roads were constructed to gain access). For instance Community A has two main entrances which can be accessed immediately off of the highway. In order for residents to enter the northern entrance of Community B they have to drive through the northern non-gated community. Access to the eastern entrance is along the road that separates Community B from the eastern community. Community C has only one entrance located on the eastern side of the property. Residents access this entrance by driving along the road that runs through the surrounding community. Similar to the gated communities, the non-gated communities and villages used all major roads and highways to gain access to these areas. In some instances people accessed and connected to neighbouring communities via desire paths (these were most common in the village area where pedestrian traffic was higher) and unofficial roads (also known as cart roads). Furthermore, the non-gated developments would be accessed via one or two entrances while the village areas had a minimum of two and a maximum of five entrances.

Curran and Grant point out that gated communities feature private streets which is the case for Community A, B and C. These developments implement barriers that permit access and road use to residents and guests only. The roads can not be used by pedestrians or motorists to connect to other locations which results in a disconnected spatial network. This is most notable in the area surrounding Community B. The use of barriers to prohibit access to Community B exacerbates the lack of connectivity that already exists in this area and it reduces the possibility of creating new access routes. Even though pedestrians and motorists have unrestricted access to the non-gated developments surrounding Community B, the existing road patterns (cul-de-sacs) reduce the connectivity of the area. This forces pedestrian and vehicular traffic to navigate around these areas to connect to major roads and to the neighbouring commercial area (see Figure 18-20, also see Appendix B for enlarged images). There is an instance where pedestrians use unofficial roads (also known as cart roads) to maneuver through the space and to connect to other communities. Similarly, the public transit travels on the outskirts along major roads and highways given that cul-de-sacs and the narrow width of village roads make these area impermeable and impassable. Observations reveal that connectivity within the villages surrounding three communities is greater given that pedestrians use various marked and unmarked paths to connect to other locations.

The road patterns in Community A, B and C are quite simple; in some instances the roads resemble the traditional cul-de-sac found in residential subdivisions (see Figures 18-20, also see Appendix B for enlarge images). In Community A the road follows the perimeter of the property and runs through the parking lots. Community B has one road major road that runs from the northern entrance to the eastern entrance and connects a number of cul-de-sacs on the way. The road that runs through Community B is a continuation of one of the roads that runs through the community on the northern side. One feature that Community A and B have in common is traffic calming. Concrete humps are installed approximately every fifty meters to slow traffic. Community C only has one major road that runs through the community similar to Community B; the road is a continuation of the road that runs through the immediate community.

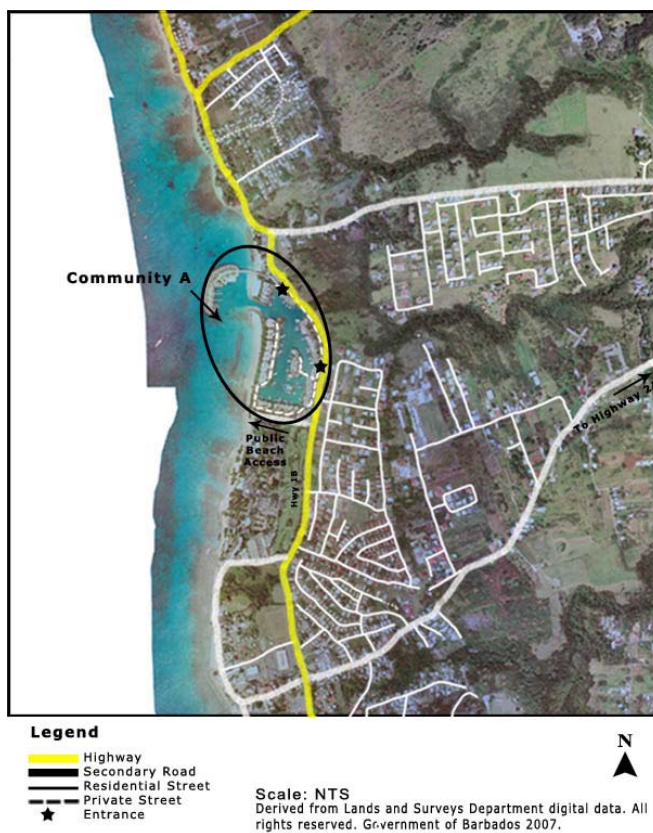


Figure 18 Road patterns for Community A and surrounding area (Lands and Surveys Department, 2007)

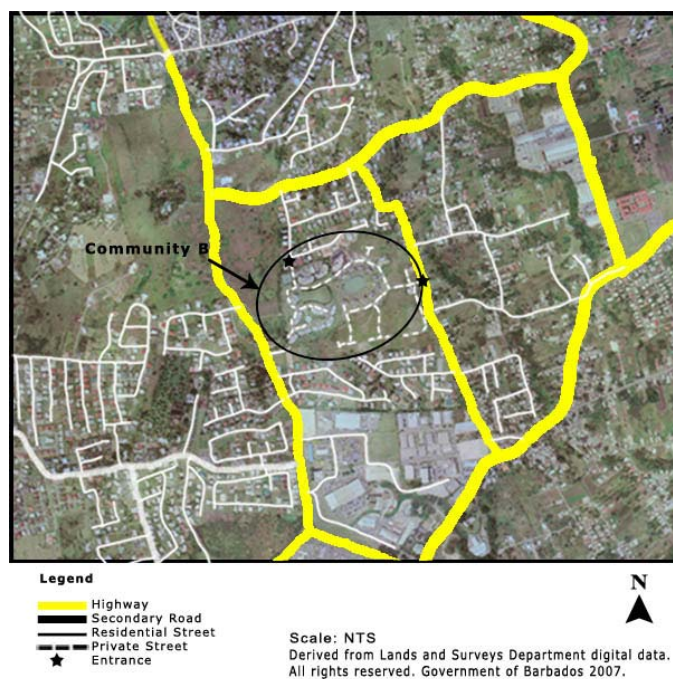


Figure 19 Roads patterns for Community B and surrounding area (Lands and Surveys Department, 2007)

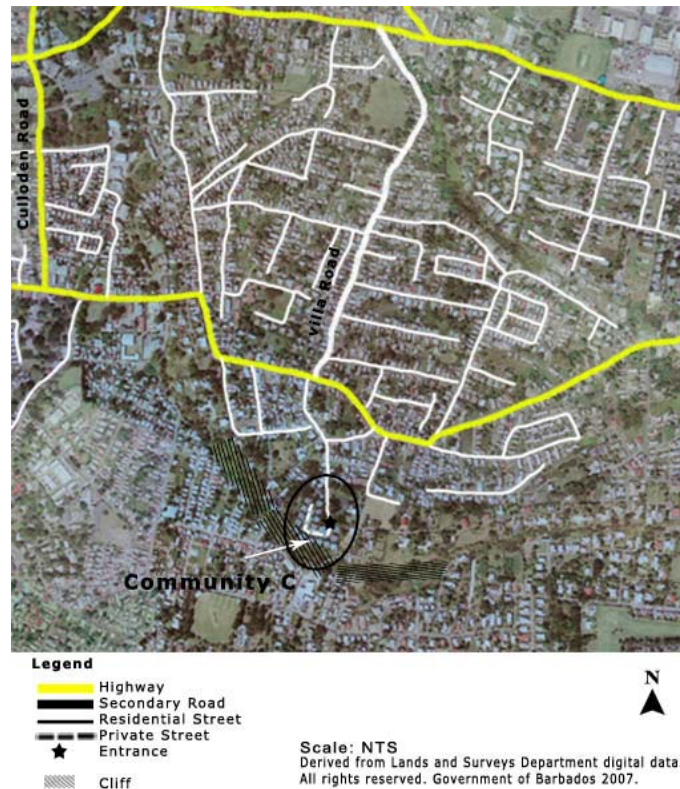


Figure 20 Road patterns for Community C and surrounding area (Lands and Surveys Department, 2007)

The roads in the non-gated developments tend to be subsidiary to main roads or highways. As I examined the aerial photos of the non-gated developments I discovered that generally one major road runs through the neighborhood: it has a few subsidiary roads that lead to cul-de-sacs. In one instance a cul-de-sac leads to an unofficial road (also known as a cart road). No roads directly link communities to each other. Motorists and pedestrians, therefore, have to exit the development to gain access to other developments. The roads in the neighbouring village areas connect to each other to form loops. These roads all lead back to various entrances off of the main road.

The physical character of gated communities

Even though the gated developments differ in location, observations indicate that they are homogenous in nature. They reveal an emphasis on neatness, uniformity, consistency, organization and aesthetics. These communities are well organized given that they are well laid out, have proper signage, and well manicured lawns and gardens. All these features enhance the aesthetic appeal of each community. In each community the dwellings (condominiums, townhouses, duplexes, and villas) are constructed of similar building materials, have similar architectural styles/designs, have uniform building heights, and color schemes (see Figures 21-23). They are uniformly laid out in a fashion that allows them to take advantage of the landscape's topography, views, and community amenities. The style, design and layout of the buildings within the development reflect some of the characteristics found in hotel developments in coastal areas.

Observations reveal that these communities, with the exception of Community C, appear to be of a higher density compared to the non-gated communities. Community A and B each have over hundred units whereas one single non-gated community has an average of forty to fifty individual houses. Community C on the other hand is of a lower density (thirty-two townhouses) compared to the surrounding village community which has over a hundred single detached houses and approximately seventy government units.



Figure 21 Typical townhouses in Community A (Google Images, 2009)



Figure 22 Typical apartments in Community B (Clement, 2009)



Figure 23 Typical townhouses in Community C (Google Images, 2009)

The literature on gated communities indicates that these types of developments are managed by homeowner's associations that are responsible for providing residents with various services. For instance the landscaping in these communities is quite extensive (see Figure 24); the homeowners' associations hire on-site maintenance staff to handle the day-to-day trimming of trees, shrubs and manicuring of lawns. The homeowners' association is also responsible for the disposal of garbage. In the case of these three communities they have sought to handle the garbage issue in three ways. One method is to build a covered structure (see Figure 25) in a central location; the second is to provide a garbage chute at the end of each block; the other is to bury the garbage cans for each unit in the ground.



Figure 24 Typical landscaping
(Google Images, 2009)



Figure 25 Typical garbage structure (Clement, 2009)

Security is one of the major features of gated communities; my investigations and observations confirmed that this is the case. The homeowners' association is responsible for the residents' safety and security. They have addressed this issue by implementing twenty-four hour security service and restricting access to either one or two entrances. In Community A, security personnel are posted at the main entrance twenty-four hours a day. In order to gain entry into the community, residents and visitors must state their business to the guard; then an automatic lifting barrier is raised, allowing them to enter or exit the property. Furthermore, because Community A is the second seaport and third port of entry into Barbados it has an onsite Customs and Immigration office, Police Station and Public Health Offices. It is uncommon to find these types of public services in a private community given that the homeowners' association is normally responsible for providing services to community residents. In Community B and Community C, residents gain access through the use of a remote clicker and code pad to operate the automatic gates. However, during the day visitors must use the intercom system to summon their party who would subsequently grant them access. Access through these communities is further restricted by automatic gates, automatic lifting barriers, a combination of walls, fences and vegetation and security personnel (see Figures 26-28). These features not only limit access and provide security, as Grant and Mittelsteadt (2004) indicate, they define the boundary of the community, create a visual screen, and permit privacy. My observations confirm these ideas. For instance Community A uses thick vegetation to create privacy for residents living on the lower levels and to prevent beach goers from seeing into the community (see Figure 29, 33). I also noted that Community B mainly uses tall and thick vegetation on the eastern boundary that abuts an area housing low income residents (see Figure 30, 34). However, on the northern, southern and western side the community boundary is more transparent. Community C is completely surrounded by a low income area: they use more

extensive measures to create a secure and private environment. In this instance a seven foot concrete wall with steel spikes on the top is installed on the perimeter of the property (see Figure 31, 32, 35).



Figure 26 Gates at Community A (Clement, 2009)



Figure 27 Gates at Community B (Google Images, 2009)



Figure 28 Gates at Community C (Clement, 2009)



Figure 29 Boundary treatment at Community A (Clement, 2009)



Figure 30 Boundary treatment at Community B (Clement, 2009)



Figure 31 Boundary treatment at Community C (Clement, 2009)



Figure 32 Typical steel spikes on boundary wall at Community C (Clement 2009)

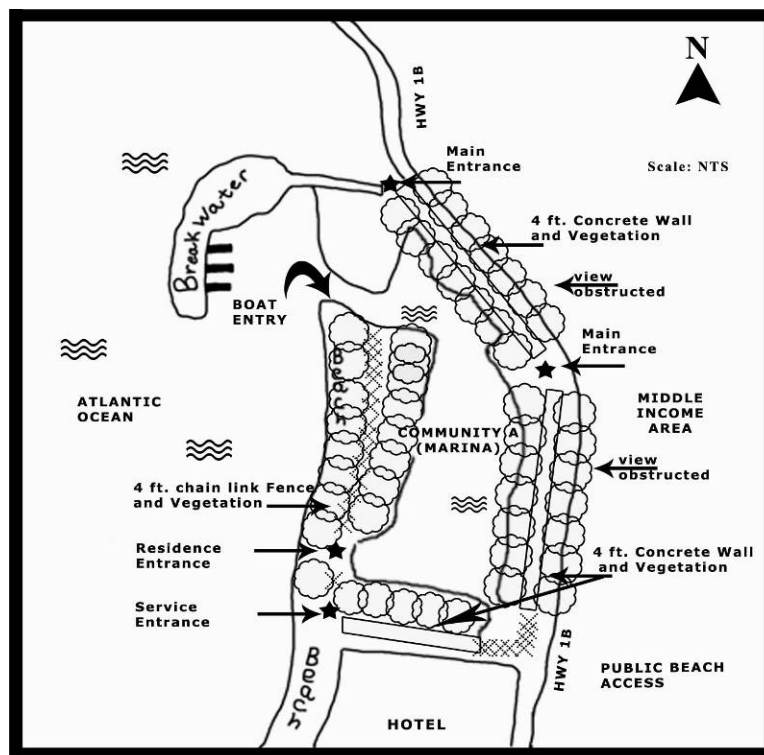


Figure 33 Community A boundary relative to surrounding use and class

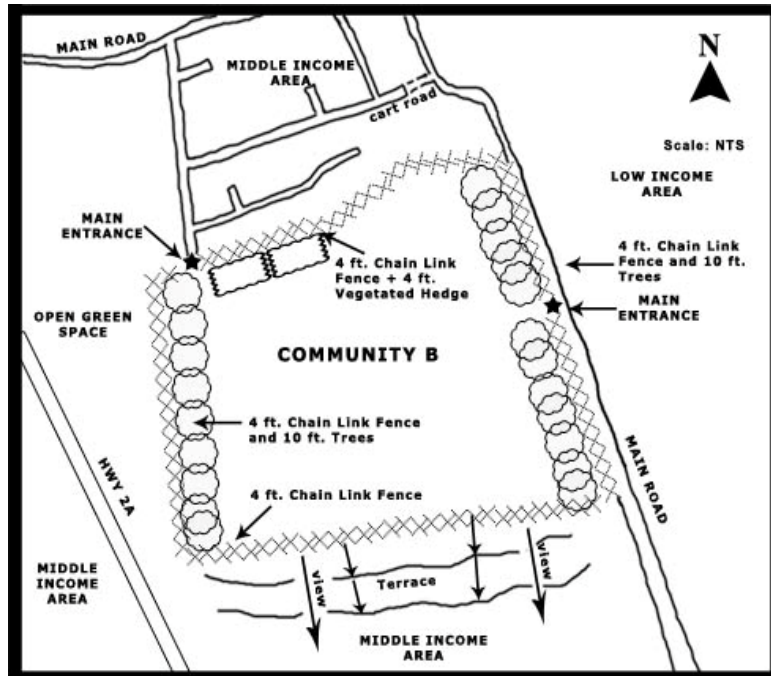


Figure 34 Community B boundary relative to surrounding use and class

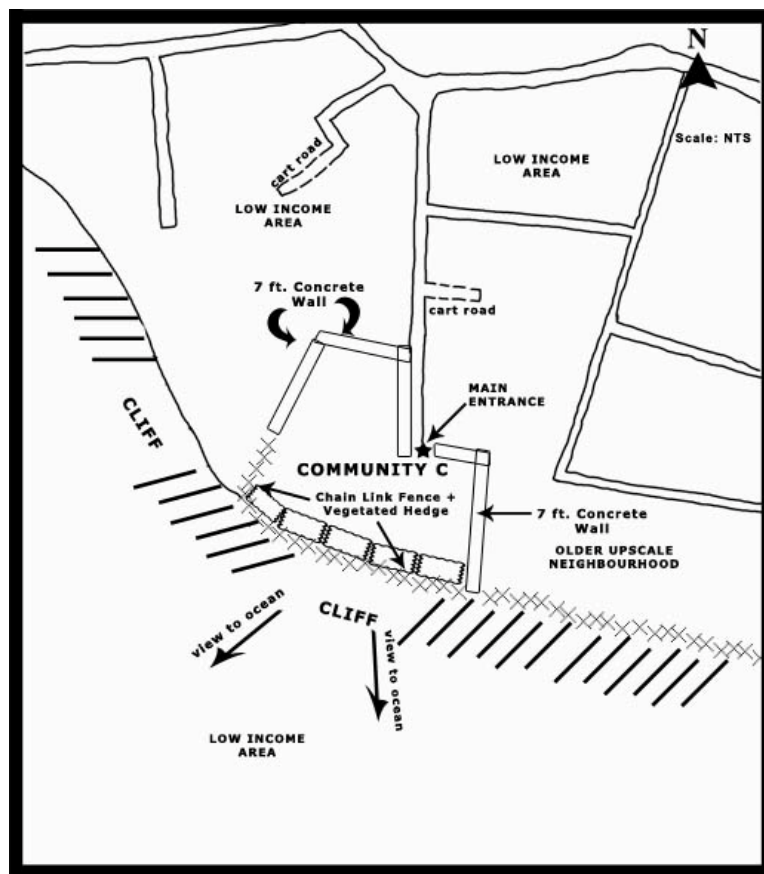


Figure 35 Community C relative to surrounding class

When compared to the gated development, the non-gated projects and village used similar types of boundary treatments (see Figures 35 and 36). However, the treatments were not as extensive. The non-gated projects used four foot walls, chain link or vegetated fences or a combination of each to define the boundaries of their properties. In the village area, residents placed minimal emphasis on defining the boundaries of each property, given that some houses occupy the full extent of the property. However, those who chose to define their edges used wire or galvanized fences to enclose either their back or front yards.



Figure 36 Typical chain link and wall fence in a non-gated community



Figure 37 Typical vegetated hedge in a non-gated community



Figure 38 Typical non-gated middle class community (Clement, 2009)

Unlike the gated communities, the non-gated communities make no collective effort to be homogeneous, organized, uniform or aesthetically pleasing. Instead they show an emphasis on individuality. Each house is different from others in terms of physical attributes (e.g. building materials, architectural styles, building heights and color schemes) (see Figure 39, 40). In the non-gated developments, the houses are single detached dwellings constructed from concrete and are of the

modern Barbadian architecture. The building heights range from bungalow to two-storey. The houses have varying color schemes or are unpainted. In the village area, the houses are predominately timber structures that resemble the chattel house, a traditional form of Barbadian architecture (see Figure 41). Some houses are entirely constructed of concrete. These are commonly found in the government housing areas (see Figure 42).



Figure 39 Typical two-storey in a non-gated community (Clement, 2009)



Figure 40 Typical bungalow house (Clement 2009)



Figure 41 Typical chattel house (Clement, 2009)



Figure 42 Typical government units (Google, 2009)

Residents in non-gated communities are responsible for the management, maintenance and safety of their property. They decide on the building layout or orientation, how the property is landscaped, when it is manicured, and how and where the garbage is disposed. In these communities, I found most houses are uniformly set back from the road. Each house has some form of landscaping; however, each property is landscaped differently. I noted that properties are manicured at different times, given that at the time of my site visits, there were houses with overgrown hedges and tall grass while others had well-trimmed hedges and well cut lawns. Non-gated developments have several vacant lots which are overgrown (although a few have been manicured). These vacant lots add to the apparent disorganization of the development. In contrast to gated communities the disposal of garbage in non-gated communities is handled differently. Residents dispose of their garbage in individual garbage cans at the front of their property. The garbage is subsequently removed by the local sanitation authorities, once a week. In non-gated developments residents are responsible for safeguarding their own properties. They rely on individual security systems, motion detectors, wrought iron bars (burglar bars), gates, fences, guard walls and watch dogs to guard and protect their homes and property.



Figure 43 Typical non-gated village community (Clement, 2009)

In the village areas, there is a significant amount of disorganization and mixed uses occurring in these areas. Houses are in varying stages of disrepair. They cluster close together and near the road edge. In these areas, I found that the properties had minimal or no landscaping. Similar to the non-gated developments, there are vacant lots in these areas which are either overgrown or used for agricultural use. In some cases these are used for the dumping of garbage and debris (consisting of old vehicles, stoves and fridges).

Residents

Gated communities are known to cause and increase social segregation given that affluent residents seek to isolate themselves in these types of communities. Community A, B and C are upscale communities that attract and cater to high earning professionals, entrepreneurs, expatriates, foreign dignitaries/diplomats, tourists, boating enthusiasts and local elites. The gated communities are surrounded by areas that attract and cater for persons in middle and lower income groups (see Figures 44-46). By contrast these non-gated communities consist mainly of locals who are either homeowners, or long or short term renters. Research conducted by Blakely and Snyder indicate that residents in gated communities are segregated by class, race and age. Residents in Community A, B and C are homogenous by class. Even though Community A caters to boating enthusiasts, the general manager indicates that there is a wide cross section of residents. A real estate agent pointed out that there are individuals over the age of fifty, young professionals and singles living in these communities. Residents in Community A, B and C consist of owner-occupiers, seasonal residents, and long and short term renters. Conversations with a realtor, a resident and a general manager revealed that residents in these communities are from various international countries such as Canada, United States, United Kingdom, South America and various islands in the Caribbean region.



Figure 44 Middle and Low Income around Community A



Figure 45 Middle and Low income around Community B

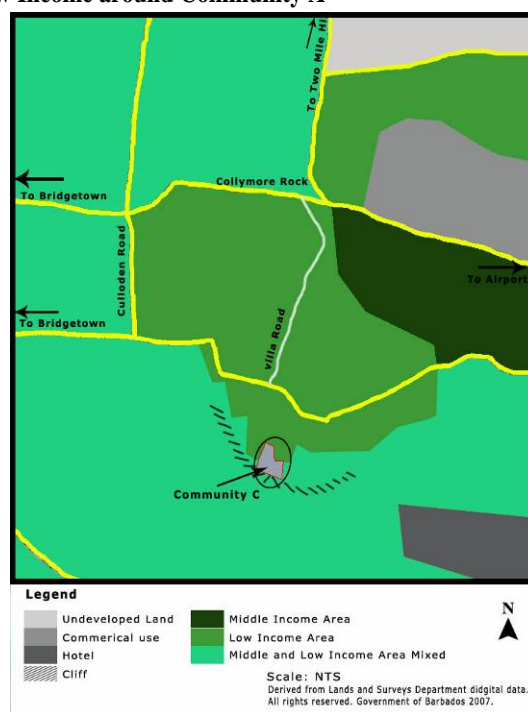


Figure 46 Middle and Low income areas around Community C

Data Analysis

The analysis of aerial photographs and information collected from the observation and interview process has helped to reveal the rationale behind gating in the Barbadian landscape. Barbados has several beaches, cliffs and terraces with special scenic attributes that attract suburban style residential developments and gated communities. However, the construction of gated communities has created some access and spatial problems. The gating of residential developments allows the developers to not only control access to community amenities but to manage how beaches and scenic vistas are accessed. Controlling access allows a degree of exclusivity, spatial, and visual privacy for gated residents. If these communities were non-gated it would permit both pedestrian and vehicular traffic to use the space as a means to connect to the beach and other locations. It can be argued that without the necessary control measures safety and deterioration of roads and lawns can become an issue. One general manager and a town planner argued that gating permits the developer to safeguard their investment from vandalism and other liability issues. In the case of Community C evidence indicated that vandalism had already occurred: here graffiti has been spray painted on the perimeter wall (see Figure 31).

Although research has shown that the construction of gated communities among existing non-gated communities does not significantly impact on physical connectivity, the barriers used to control access raised socio-spatial issues (such as social segregation and exclusion), given that gating allows large and small areas of affluence to exist in middle and low income areas. Here developers are able to build upscale accommodation for high class residents in areas where modest housing is prevalent. It allows high class residents to enjoy beach and visual amenities while secluding themselves from the rest of the Barbadian society. The walls may physically divide parts of the Barbadian landscape into “have and have not developments”. Grant points out that “gates exacerbate the separation of the affluent from the rest of society” (Grant et al, 2004, 79). One political activist further states that “there was one set of Barbadians living behind gated communities and getting everything they wanted, and another pushed away in little tenancies, living in small houses” (Transporter, 2008, 10). This type of social divide is not unique to Barbados; it is also being experienced in Trinidad. Mycoo (2006) pointed out that gated communities for the extremely wealthy appear in western suburban areas where squatter settlements and the lower classes are most prevalent. Even though the gated communities were multi-ethnic they emphasized social divide in the cities. Mycoo stated that “Trinidad's gated communities are a specific and relatively new expression of the increasing social disparities in the society contributing to the deepening of social segregation in urban areas. Nevertheless, they remain multiethnic in composition” (Mycoo, 2006, 139).

Even though Community A, B and C are isolated and may boast exclusive access to amenities my research has shown that they are not entirely self contained. The absence of commercial, entertainment facilities, supermarkets, and medical services within the community forces residents to rely on outside sources to access these amenities. Based on the pricing information provided by the real estate agent (Real estate agent, 2009) it can be argued that cost associated with these communities excludes certain classes of residents. This further emphasizes social exclusion. Landman points out that “neighbourhoods have always been able to exclude certain classes of residents through discrimination and housing costs” (Landman, 2000, 4).

The advent of gated communities in Barbados has introduced a concept of residential developments which is new to the island. This type of North American suburban style has introduced not only new housing styles but also large lot sizes, sprawl layouts and large enclosed areas to the land that are not consistent with the local development pattern. For example the homogenous style of housing has changed the physical and cultural characteristics of housing to which Barbados has become accustomed, creating a more global pattern rather than the Barbadian tradition. Barbados comprises several villages, plantation tenancies, and small residential subdivisions which feature modest homes (chattel), bungalows, and two-storey single detached houses with dissimilar styles; however gated communities have introduced multi-storey, condominiums, and semi-detached dwellings with homogenous architecture styles. This is quite apparent when Community A, B, and C are compared to the respective non-gated communities. Even though Community A's homogenous architectural style and form may blend in with the adjacent hotel, these aspects are significantly different from those found in the surrounding non-gated developments. Community A comprises upscale three-storey condominiums and townhouses whereas the non-gated developments consist of modest bungalows and two-storey single detached houses. Community B has a combination of upscale three to four-storey condominiums, and several semi-detached dwellings which contrast with the middle class single detached dwellings. In Community C the difference is considerably apparent. In this instance there are thirty-two upscale townhouses among several modest wooden and cinder block bungalow structures. The introduction of gated communities has further introduced a new lifestyle similar to that found in North America. Gated communities in Barbados cater to the leisure class, expatriates and local elites. In an effort to maintain their lifestyle, management and homeowners' associations seek to standardize civic goods and services within the community.



Figure 47 Typical Boundary for a gated community
et. el., 204)



Figure 48 Typical chain link fence in a gated Grant,
community in Barbados (Clement, 2009)

Boundary treatments are usually depicted in the literature on gated communities as ornamental metal fences with stone work (see Figure 47). This however differed in the communities in my investigation, since Community A, B, and C used chain link fences partially or completely to demarcate the boundary (see Figure 48). Observations revealed that this type of boundary treatment is a common application found in the neighbouring non-gated communities. It appeared that the height and type of boundary treatment differed depending on class of residents and type of land uses adjacent to the gated community.

Community A used a consistent four foot chain link/concrete fence and vegetated hedge to demarcate the boundary of the community (see Figure 33). As previously noted this community used a thick vegetated hedge, trees and a four foot chain link fence to create some measure of privacy along its beach front. It can be argued that Community A and B proximity to high traffic areas and major traffic arteries has influenced the type of treatments used along the edges. For instance Community A used trees, floral hedges and a concrete wall along the beach access and the highway, whereas Community B used a chain link fence and thick vegetation along the eastern side which abuts a low income area and a major access road (see Figure 34). On the western side of the community even though set back approximately 200 yards from the highway the same boundary treatment is applied. In the case of Community A the concrete walls were used in these areas to limit visibility into the community especially on the lower levels and to buffer the noise generated by traffic on the adjacent highway. In regards to Community B it appeared that this type of boundary treatment was applied to conceal the disparity between the two communities, hinder any noise pollution or to create a visual barrier or privacy. On the northern and southern sides of the community the boundary treatments appeared simpler. The four foot chain link fence is maintained but the vegetation is adequately spaced, therefore allowing the residents in the adjacent non-gated community to see into the community. After visiting Community A and B I noted that the vast and varying selection of vegetation (colour and species) made Community A aesthetically pleasing; it stood out in its surrounding. The type of boundary treatment further emphasized the size of the community, whereas with Community B the consistent height and species of trees made the community blend in with the surrounding vegetation; this made the community's presence less obvious. In addition to the boundary treatments each community with the exception of Community A used an automatic ornamental metal gate. Unlike the fences in these three communities the gates are consistent with those depicted in the gated community literature. During the observations it was noted that Community B and C had guard huts at the entrances; however the guards were not present at the time of each visit. On visiting Community A security personnel were present to operate the automatic lifting arm. Even though the gates appeared to be a robust form of security, the posting of a guard seemed to provide an added measure of security.

In the third community there was a significant class difference between Community C and the surrounding non-gated community. Community C is an area of high class while the non-gated community is constituted as a low income area. Here a seven foot concrete wall enclosed the community making it physically and visually impermeable (see Figure 31, 35). It can be further argued that based on the height and the application of spikes on the walls in Community C served as a defense mechanism to increase the level of security.

As part of the data analysis this paper examined whether the reinforcement of boundaries varied according to the price of the units. As previously discussed each community used a different type of boundary treatment that made the community physically and visually impermeable. The research revealed that Community C boundaries were much higher and heavily reinforced even though the cost of the units were lower than those in Community A and B. In this scenario, it appeared that the class outside the community has a greater effect on the boundary features than the price of the units inside of the community. I further examined the connection between the cost of the dwelling units and the location of the Community A, B, and C. The prices shown in Table 3 indicate that

the dwelling units in Community A were higher than those in Community B and C. It is apparent that Community A's coastal location is one of the factors that influenced cost of the dwelling units. Price can further be influenced by the size of the community, the number and type of amenities offered. Community A (22 acres) is much larger than Community B (15 acres) and C (4 acres) and it is a lifestyle community which offered leisure amenities, which can be perceived as another contributing factor to the cost of the units. When compared, Community B is larger than Community C and it offered residents amenities such tennis courts, children's faculties, two communal pools and walking trail compared to Community C which has a swimming pool as its only amenity.

Table 3 Price range for sales and rent in Community A, B and C (Sources: Community A brochure and www.seasiderealtybarbados.com)

	Community A	Community B	Community C
Sale (US)	\$795,000.00 - \$2,250,000.00 (resale)	\$450,000.00 - \$850,000.00	\$400,000.00
Rent (US)	\$2,000 - \$6,000	\$2,000.00 - \$4,000.00	\$1,900.00

CHAPTER FOUR

CONCLUSION

This paper examined how three gated developments in Barbados related spatially and physically to the wider community and compared the developments' physical attributes to neighbouring non-gated communities. The data collected during this research has revealed some important information about gated communities in Barbados. The literature may indicate that gated developments affect physical connectivity; however, the research in Barbados suggested otherwise. The lack of access prior to development, the small scale, and the location of the gated communities has not significantly impacted connectivity. The research further indicated that gated communities introduced a non-traditional development pattern that has started to change the physical characteristics of the landscape, especially in the inland region. In the Barbadian context gated communities have introduced large enclosed areas with high density to areas dominated by villages, tenancies and small residential subdivisions. Gated communities have the potential to change the physical character of the landscape. As the research showed gating has brought upscale multi-storey condominiums and semi-detached housing with homogenous architecture to areas with modest low-rise single-detached housing with vernacular architectural styles.

The evidence indicated similarity in the physical boundaries of gated non-gated communities; however, the heights and the extent to which boundaries are reinforced differed. This analysis has suggested that the neighbouring uses and class affect the extent to which boundaries are reinforced. On the other hand, boundaries are higher and strongly reinforced in areas where class differences are greater and there are unattractive views such as highways. On the other hand, the boundaries are more simple, lower and visually permeable where there are attractive views and the class of residents are the same or closer to the residents in the gated community.

Even though this paper focused on the spatial aspects of gated developments, it showed that these aspects can create and have an effect on social issues. Gated communities contribute to social exclusion and segregation. This research suggests that barriers create areas of exclusivity, where those who can afford the cost associated with gated developments are included, whereas those who are unable to are excluded from the community. Gating creates a "them and us mentality" (Blandy et al, 2005). The barriers also physically divide parts of the Barbadian landscape into "have and have not" developments.

The Barbados government recognized privatization and foreign investment as a means to stimulate economic development. It has taken measures (such as the removal of the property transfer tax) to encourage foreign investment. Similarly the Bahamian government encouraged and supported luxury developments such as gated communities and exclusive resorts based on potential economic stimulation and creation of jobs. The construction of luxury developments along the coastline has become a controversial issue mainly due to the fact that local people have lost access to beaches and historical sites are being destroyed. Environmentalist and preservationists have also voiced concerns regarding potential damage to reefs. The Barbadian government should be cognizant of the Bahamas' experience and the cries of their citizens about losing access to beaches and

heritage sites in pursuit of economic gain. Careful consideration should be given when giving approval to gated developments that will occupy areas with panoramic views and historical sites. It is important that Barbados' assets be shared by all and not a select few. David Comissiong implored the then Prime Minister Mr. Owen Arthur "to issue a public statement setting out clearly and unambiguously that from now onward the policy of the Government of Barbados will be that: no more gated communities will be permitted to be established in Barbados; there must be no interference whatsoever with public access to the beaches of Barbados; established and traditional public pathways and rights of ways must be respected; and the views and vistas of landscape of Barbados will be protected for the common enjoyment of Barbadians and visitors to our island" (The PEP Column, 2007, 10).

Gated communities are likely to become a long term building trend in Barbados. If they increase in size and numbers they will continue to have an impact on how Barbadians access traditional amenities such as beaches and views ultimately, they have the potential to distort the physical characteristics that make the island uniquely Barbadian.

Additions to literature and areas for future research

As far as the writer knows there has been no published research on gated communities in Barbados. This research therefore contributes to the literature on gated communities in that it has started to document the spatial and physical aspects of the gated phenomenon in Barbados. It adds an urban design perspective to the literature given that the paper specifically focused on how gated developments relate spatially and physically to the surrounding suburban fabric.² This paper highlights a potential problem that gated communities cause especially in inland areas, that could undermine the functionality of the suburban space in the future. Even though the gated developments may be small in scale they emphasize the lack of connectivity and lessen opportunities for future connecting routes. Town planners therefore should be aware of this fact and give careful consideration when approving such developments. The local authorities should be further cognizant of the socio-spatial issues associated with gated communities as they could have adverse social implications for the country that might require appropriate policy measures.

As there is limited research on gated communities in Barbados there are several aspects for further research. I would first suggest that the spatial aspects of gated communities be further explored in other locations across the island. The research should focus on gated developments that are larger than those discussed in this paper and examine those developments that have the potential to disrupt other traditional public amenities. The data collected during my observations indicated that gated communities not only appear in predominantly middle income areas, they also occur in low income areas. Future research should investigate what factors developers consider when selecting low income locations for development. This research has indicated that gated communities contrast to the socio-spatial divide especially in low income areas. It would therefore be of value to interview non-gated residents who live in the community before and after development, to get their perspective on how gated communities relate to and affect the community. Conducting such interviews would assist in the efforts to understand the social and socio-spatial impact of gated communities in Barbados.

² Urban design is the process of creating a balance between the built form and the natural environment and creating functional spaces that facilitate connectivity and the movement of people.

Bibliography

- Altman Real Estate. Web. 19 July 2009.
<[http://www.aaaltman.com/schooner.php?action=search&propertyTypeIDs\[\]=11&bedrooms=&prID=&saleType=2&searchType=1&Submit=Search](http://www.aaaltman.com/schooner.php?action=search&propertyTypeIDs[]=11&bedrooms=&prID=&saleType=2&searchType=1&Submit=Search)>.
- Atkinson, R., & Flint, J. 2004. Fortress UK? Gated communities, the spatial revolt of the elites and times-space trajectories of segregation, *Housing Studies*, 19(6), 875-892
- Atlas, R., Leblanc, W.G. 1994. "The Impact on Crime of Street Closures and Barricades: A Florida Case Study", *Security Journal*, vol. 5, pp. 140-145.
- Barbados Statistical Department. 2002. 2000 *Population and Housing Census* Volume 1. Government Printing Department
- Baron, L. M. 1998. The great gate debate. *Builder*, pp. 92–100, March.
- Berg, B. 2004. *Qualitative Research Methods for the Social Sciences* Fifth Edition. Pearson
- Bible D S, Hsieh C. 2001. "Gated communities and residential property values." *The Appraisal Journal* 69(2) 140 - 145
- Blakely, E. J. 2007. Guest Editors Introduction: Gated Communities for a Frayed and Afraid World. *Housing Policy Debate* 18 (3). 475 - 480.
- Blakely, E. J., & Snyder, M. G. 1997. *Fortress America*, Washington, DC: Brookings Institution,
- Blandy, S., Lister, D., Atkinson, R., & Flint, J. 2003. Gated communities: A systematic review of the research evidence, CNR Paper 12, *Economic and Social Research Council Centre for Neighbourhood Research*. Bristol: United Kingdom.
- Bradshaw, M. "Gated Areas on the Rise". *Nation Newspaper*. 20 Oct. 2006. Web. 26 Sept. 2009.
<http://archive.nationnews.com/archive_detail.php?archiveFile=2006/October/20/CropOver/27720.xml&start=0&numPer=20&keyword=gated+area+on+rise§ionSearch=&begindate=1%2F1%2F1994&enddate=3%2F20%2F2010&authorSearch=&IncludeStories=1&pubsection=&page=&IncludePages=1&IncludeImages=1&mode=allwords&archive_pubname=Daily+Nation%0A%09%09%09>.
- Bunce, M. 2008. The “leisuring” of rural landscapes in Barbados: New Spatialities and the implications for sustainability in small island states. *Geoforum* 39. 969-979
- Burke, M., Sebaly, C. 2001. Locking in the pedestrian. The Privatised streets of gated communities, *World Transport Policy & Practice*, 7 (4): 67-74
- Chavis, D.M., Lee, K.S., & Acosta J.D. 2008. *The Sense of Community (SCI) Revised: The Reliability and Validity of the SCI-2*. Paper presented at the 2nd International Community Psychology Conference, Lisboa, Portugal
- Curran, A. and Grant, J. 2006, Private streets: a survey of policy and practice, *Canadian Journal of Urban Research: Canadian Planning and Policy*, 15(1): 62–78.
- Developers’ Representative, Emailed Interview 30 Sept. 2009
- General Manager. Personal interview. 5 Nov. 2009.
- Goldberg, R. 2006. Glen Oaks Residential Community: a case study about the implications of gated communities. Iowa State University Ames, Iowa
- Gonzalez D. 2000. “Bahamians resent the loss of beaches to luxury" *NewYork Times* 29 February,

- Grant, J. 2003. Canadian planning approaches to gated communities. Paper presented at the Canadian Institute of Planners Conference, Halifax, 6–9 July.
- Grant, J., (2005). Planning responses to gated communities in Canada. *Housing Studies* 20 (2): 277-89.
- Grant, J. and Curran, A. 2007, Privatized suburbia: the implications of private roads, *Environment and Planning B: Planning and Design*, 34(4): 740–754.
- Grant, J., & Mittelsteadt, L. 2004. Types of gated communities. *Environment and Planning B: Planning and Design*, 31, 913-930.
- Grant, J., K. Greene and K. Maxwell. 2004. The planning and policy implications of gated communities. *Canadian Journal of Urban Research* 13 (1): Supplement: 70-88.
- Greenstein, R, Sabatini, F and Smolka, M. 2000. Urban Spatial Segregation: Forces, Consequences, and Policy Responses, *Land Lines* 12 (6)
- Government of Barbados 2003. Physical Development Plan Amended 2003. Government Printing Department.
- Government of Barbados. 1983. Prosperity through increase productivity. Government Printing Department.
- Landman, K. 2000. Gated communities and urban sustainability: taking a closer look at the future. *Proceesings: strategies for sustainable built environment*. Web. 5 Nov. 2009. <<http://www.sustainablesettlement.co.za/event/SSBE/Proceedings/landman.pdf>>
- Low, Setha M. 2003. *Behind the Gates: Life, Security, and the Pursuit of Happiness in Fortress America*. New York: Routledge
- McKenzie E. 2003. "Private gated communities in the American urban fabric: emerging trends in their production, practices, and regulation". Paper presented at Gated Communities: Building Division or Safer Communities?, 18 -19 September 2003, Department of Urban Studies University of Glasgow, Scotland. Web, 20 January 2010. <<http://www.ahrc.com/new/contents/media/uploads/338mckenzie2.pdf>>
- McMillan, D.W., & Chavis, D. M. 1986.. Sense of community: A definition and theory. *Journal of Community Psychology*, 14, 6-23.
- Mycoo M, 2006, "The retreat of the upper and middle classes to gated communities in the poststructural adjustment era: the case of Trinidad" *Environment and Planning A* 38(1) 131 – 148
- Nurse, L. 1979. Residential Subdivisions of Barbados, 1965–1977. *Institute for Social and Economic Research*, University of the West Indies, Barbados.
- PEP Column. "Act Now, Mr Prime Minister". *Weekend Nation*. 5 Jan. 2007. Web. 5 Nov. 2009. <<http://archive.nationnews.com>>
- Real estate agent, Emailed Interview, 22 Nov. 2009
- Seaside Realty Inc., 16 Aug. 2007. Web. 28 Mar. 2010. <<http://www.seasiderealtybarbados.com/propertydetail.php?id=660>>.
- Town planner. Personal Interview, 17 Nov. 2009.
- Town and Country Development Planning Office (2007). *The Applicant's Handbook and Guide to Town Planning Second Edition*. Government Printing Department.
- Transport Board. 2008. Web. Oct. 2009. <<http://www.transportboard.com/schedule.php>>.
- Transporter. "Carrington: Country split in two". *Campaign Express*. 10 Jan. 2008 Web. 5 Nov. 2009. <<http://archive.nationnews.com>>

- Vessenlinov, E., & Cazessus, M. 2007. Gated communities and spatial inequality. *Journal of Urban Affairs*. 29 (2). 109-127.
- Webster C. 2001. "Gated cities of tomorrow" *Town Planning Review*. 72 149 – 169.
- Wilson-Doenges, G. 2000. An exploration of sense of community and fear of crime in gated communities. *Environment and Behavior* 32 (5): 597-611.
- Yin, R. 2003. *Case study research design and methods* third edition. Sage Publications.

APPENDIX A

Table 1

Name of Gated Community:	
Location	
Description	Notes
Name of communities closest to the GC	
Physical location (e.g. parish, cliff, terrace, coast line, highway, etc.)	
Is there a discontinuity between the gated community and non-gated community?	
Are the surrounding neighbourhood for the upscale, middle or low income residents.	
Proximity to business center (distance, time)	
Proximity to commercial center	
Proximity to (schools, beaches, dinning, community centers, sport fields, golf, polo, green spaces)	
Houses	
Description	Notes
Number of structures (houses and apartments, townhouses)	
Type (e.g. apartment, condo, townhouse and individual houses)	
Architecture Style	
# of houses under construction	
Building Material (concrete, timber) How many?	
Building Heights (e.g. bungalow, two storey etc.) How many	
House Conditions	
House values	
Physical Characteristics	
Description	Notes
Type of Entrance	
Number of Entrances	
Boundary Treatments (e.g. walls, fences trees)	
Layout/Settlement Patterns	
Road (e.g. road conditions, pattern, width, Street Lights)	

Access to views	
Types of land uses (e.g. residential, commercial, etc.)	
Ambiance (e.g. parking, landscaping, garbage disposal)	
Lot sizes (sq. ft.) Vacant lots (used for dumping, agriculture, over grown, or manicured)	
Type of security (e.g. video surveillance, security guard, neighbourhood watch, watch dog, motion detectors)	
Infrastructure (e.g. power, telephone, hydrant, street lights) Underground or above ground	
Maintenance	
Description	Notes
House and surrounding property	
Residents e.g. upper class, upper middle, middle class, working class expatriates	
Travel Behaviour	
Description	Notes
Pedestrians	
Bus routes	
Private transportation	

Raquel Clement
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St. Thomas
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Email: rq664199@dal.ca

November 2, 2009

Dear Sir,

My name is Raquel Clement and I am a student in the Planning Department at Dalhousie University, Nova Scotia, Canada. I am in the process of preparing my thesis, which is in partial fulfillment of the Bachelor of Community Design Honours Program, for January 2010. The thesis will seek to determine why the North American gated community culture has caught on in Barbados. It will focus on how gated communities relate spatially and physically to the larger area and will compare them to open communities, using Community A as a case study.

Your participation in this study is appreciated since I am interested in getting a developer's perspective on gated communities. There are no foreseeable risks involved in participating in this study. Your participation is completely voluntary and you may refuse to participate or leave the study at any time.

I will use the information to add to public knowledge about gated communities in Barbados. Please note that to ensure company's and your confidentiality I will use pseudo names in my thesis report.

If you have any questions please do not hesitate to contact me at the above address and telephone numbers. You may also contact my research supervisor, Dr Jill Grant, 902-494-6586 or at jill.grant@dal.ca.

Thank you for your assistance in this matter.
Yours faithfully,

.....
Raquel Clement

Thank you for agreeing to the interview. As you are aware I am studying gated communities in Barbados and I know that you are involved with the Community A. Can you describe the community to me?

When was the development constructed?

What is the size of the development?

Is the development complete?

Are there plans to expand the project?

What year was the project officially opened?

How many dwellings have been constructed?

What types of housing units are in the community? (Example, townhouses, apartments)

How many residents currently live in the development?

What amenities does the development offer?

How many entrances does the development have?

Does each entrance have a gate?

What method is used for entry? (Example, key, cards, code pad, bar code, electronic pass)

Does the gate have guards posted at the entrances? (at all hours, only at particular hours)

Does the development use other security devices? (Example, video surveillance, alarms in houses)

What are the tenure arrangements? (Example, freehold ownership, condominiums, land lease, rental).

What is the price range for sales in the community?

Minimum:

Maximum:

Would you say that gated communities are increasing in Barbados? If yes, What would you say is the cause for the increase in gated communities?

Why have you chosen to develop the land as a gated development rather than an open development?

What method do you use when choosing a location for a gated development?

Why did you choose this location for Millennium Heights?

How would you describe the demand for gated communities in Barbados?

How are you meeting the demand?

What clientele do you attract in your marketing of gated developments?

Is Community A exclusive to a certain category of persons?

What are some of the reasons people prefer to live in a gated community in Barbados?

What make such project attractive to home buyers?

What categories of persons are demanding gated communities? (Probe: locals, expatriates, returning nationals)

Are you involved in any other gated communities projects? If yes, which ones?

What kind of planning process did the project have to go through?

Did it have to go to a public meeting?

Were any special permissions required (eg, for private roads)

What special issues came up because the community was to be gated?

What concerns did services such as fire, police or public works raise?

What concerns did neighbours to the project express?

Have any special issues come up since the project was gated? (Probe: example,

parking

access by public services

access for privates services (eg, TV, power company, telephone)

crime

other

Were there any social or political concerns associated with this particular project?

What would you say has caused the gated culture to catch on in Barbados?

Do you see gated communities as a temporary fad or long term building trend?

Would you say there is a future for gated communities in Barbados? If yes/no, explain.

Would it be possible to obtain a site plan for the community?

Thank you very much for your help with this.

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November 18, 2009

Dear Sir,

My name is Raquel Clement and I am a student in the Planning School at Dalhousie University, Nova Scotia, Canada. I am in the process of preparing my thesis, which is in partial fulfillment of the Bachelor of Community Design Honours Program, for January 2010. The thesis seeks to understand how the North American gated community culture has caught on in Barbados.

Your participation in this study is appreciated since I am interested in getting a realtor's perspective on gated communities. There are no foreseeable risks involved in participating in this study. Your participation is completely voluntary and you may refuse to participate or leave the study at any time.

I will use the information to add to public knowledge about gated communities in Barbados. Please note that to ensure company's and your confidentiality I will use pseudo names in my thesis report.

If you have any questions please do not hesitate to contact me at the above address and telephone numbers. You may also contact my research supervisor, Dr Jill Grant, 902-494-6586 or at jill.grant@dal.ca.

Thank you for your assistance in this matter.

Yours faithfully,

.....
Raquel Clement

Thank you for agreeing to the interview. As you are aware I am studying the emergence of gated communities in Barbados and I know that you manage such communities on the island. I would like to get the real estate agent's perspective.

What would you say has caused the gated culture to catch on in Barbados?

Would you say that gated communities are increasing in Barbados? If yes, what would you say is the cause for the increase in gated communities?

How are these communities marketed?

In marketing these communities are developers marketing Barbados as well?

How would you describe the demand for gated communities?

How are you meeting the demand?

What clientele do you attract in your marketing of gated developments?

Are any of the communities exclusive to a certain category of persons?

What percentage of your owners are locals and foreigners?

What percentages of your renting tenants are local and foreigners?

What are some of the reasons people prefer to live in a gated community in Barbados?

What make such project attractive to home buyers?

What categories of persons are demanding gated communities? (Probe: locals, expatriates, returning nationals)

How does the location of the gated community affect the demand?

What percentage of the properties you manage are gated communities?

Is there a particular type of community that is in high demand? (Example: lifestyle, prestigious)

To what extent do you see gated communities as a temporary fad or long term building trend?

How much turn over occurs with residents or renting tenants in these developments?

How is the resale market for these properties?

What is the price range for sales in these communities?

Minimum:

Maximum:

How does the location of the community determine price?

Who pays the property transfer tax?

What do you see as the future for gated communities in Barbados?

Thank you for your assistance in this matter.

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November 17, 2009

Dear Sir,

My name is Raquel Clement and I am a student in the Planning Department at Dalhousie University, Nova Scotia, Canada. I am in the process of preparing my thesis, which is in partial fulfillment of the Bachelor of Community Design Honours Program, for January 2010. The thesis will seek to determine why the North American gated community culture has caught on in Barbados.

Your participation in this study is appreciated since I am interested in getting a planner's perspective on gated communities. There are no foreseeable risks involved in participating in this study.

I will use the information to add to public knowledge about gated communities in Barbados. Please note that to ensure confidentiality I will use a pseudo name in my thesis report.

If you have any questions please do not hesitate to contact me at the above address and telephone numbers. You may also contact my research supervisor, Dr Jill Grant, 902-494-6586 or at jill.grant@dal.ca.

Thank you for your kind assistance in this study.

Yours faithfully,

.....
Raquel Clement

Thank you for agreeing to the interview. As you are aware I am studying gated communities in Barbados and I know that there are a number of them located across the island.

What are your views on gated communities in Barbados?

What would you say has caused the gated culture to catch on in Barbados?

To what extent would you say that gated communities are increasing in Barbados?

What are the advantages of gated communities?

What are the negative affects of these developments?

How have gated communities affected the physical landscape of Barbados?

Why are developers building gated communities?

How many proposals would you have received/reviewed for gated projects during the last five years?

Are there any policies, regulations or special processes you have to follow when dealing with proposals for gated community projects?

Do you anticipate that Town and Country Planning will develop policy, regulations or special processes to deal with such proposals?

What kind of planning processes do these large scale residential developments have to go through?

Have there been any social or political concerns associated gated projects you were involved in?

What do you think are the cultural and social implications of gated communities?

At anytime did you have to go through any appeal processes or public hearing for any of the projects you were involved in?

Do you see any long term effects around gated projects in Barbados? (For example, around public services (eg, fire, police, garbage collection, emergency services access)
public amenities

rural form and transportation connectivity

taxation

affordable housing

economic segregation

special needs of an aging population

Are there other issues that you expect may come up over the long term?

What special issues came up because of gated communities?

What concerns did services such as fire, police or public works raise?

What concerns did neighbours to the project express?

Do you see gated communities as a temporary fad or long term building trend?

To sum up what do you think about gated communities in Barbados?

Thank you very much for your help with this.

APPENDIX B

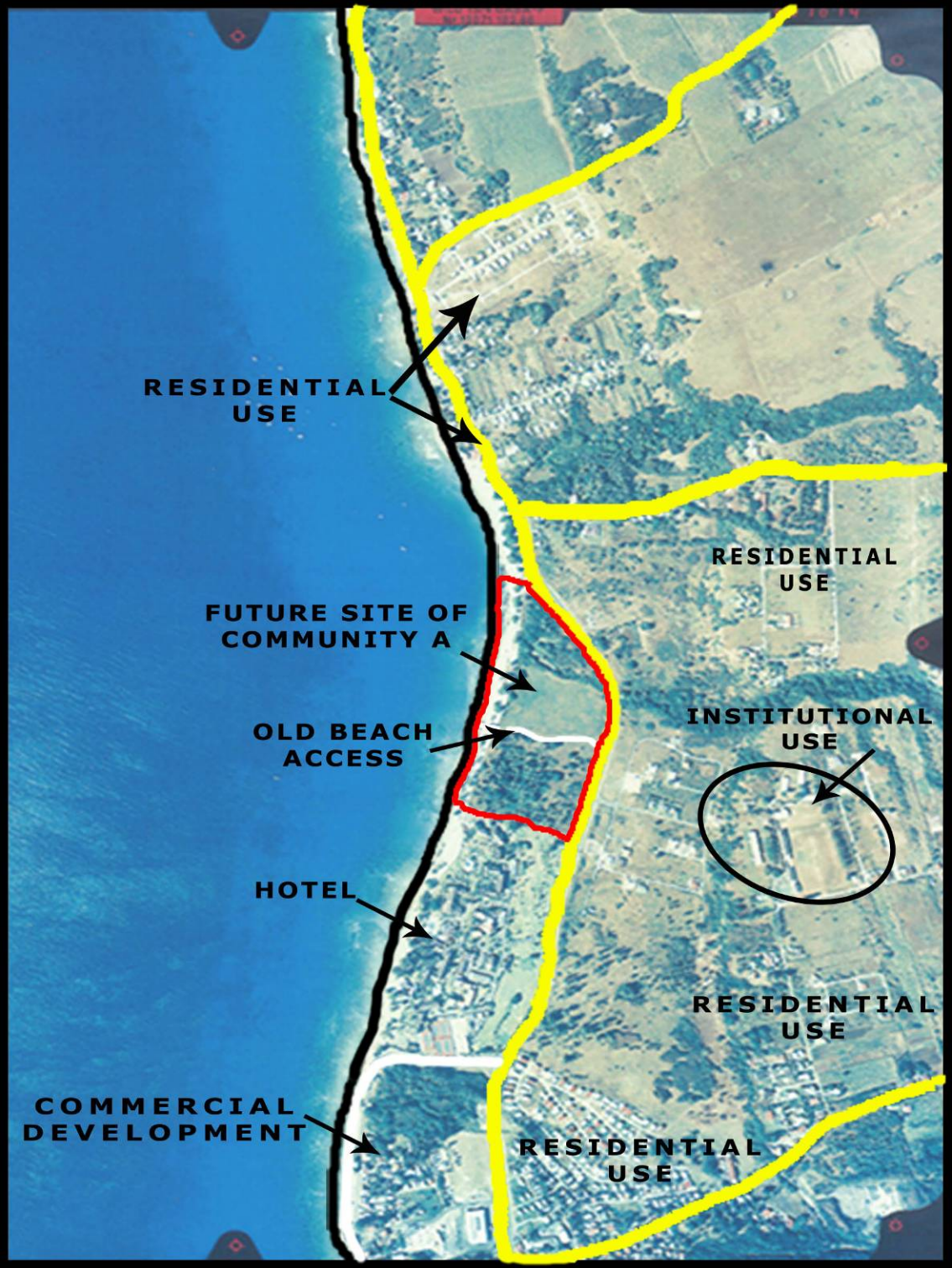


Figure 8 Land uses around Community A in 1991

Scale: 1:10,000
Derived from Lands and Surveys Department digital data.
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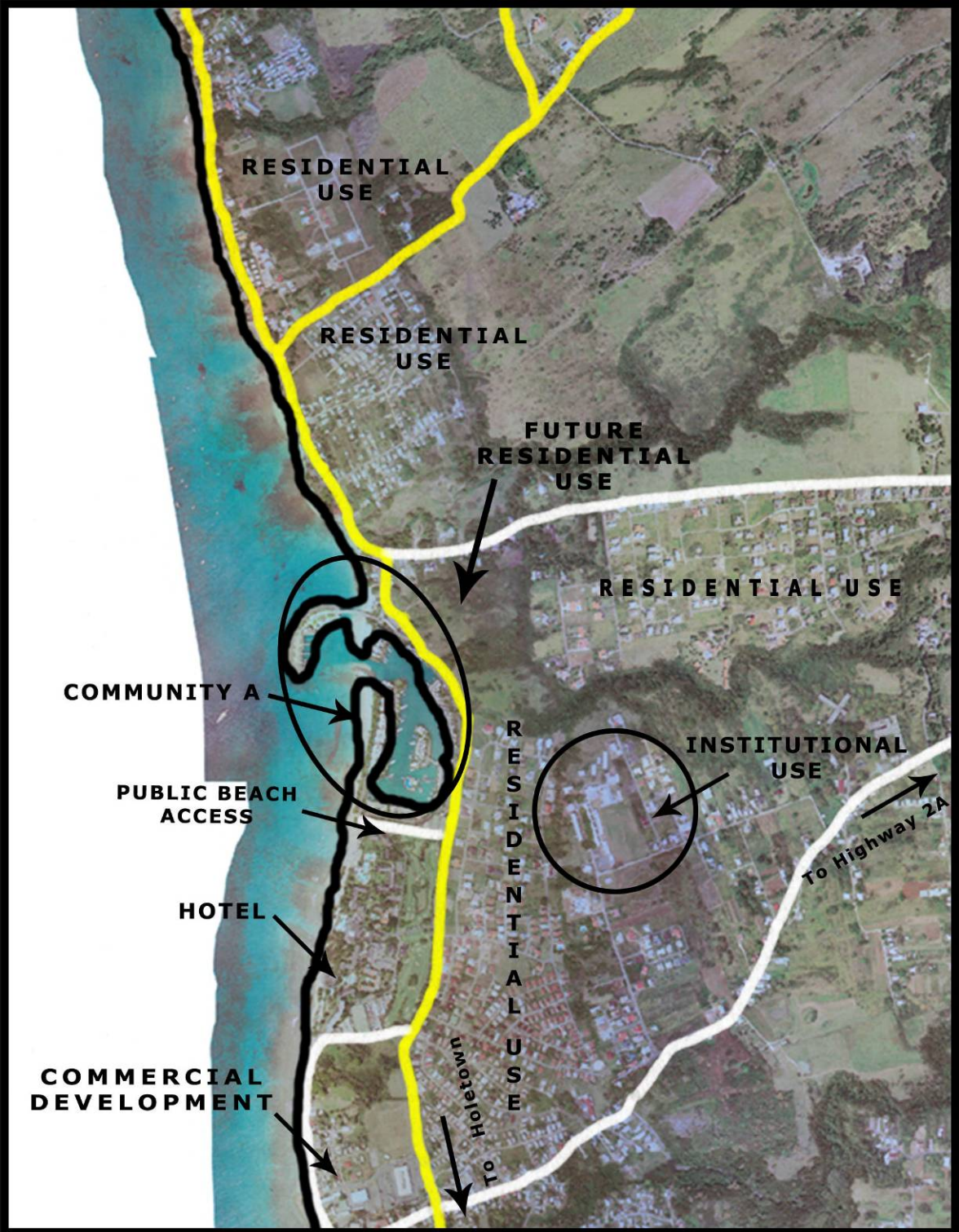


Figure 9 Land uses around Community A in 2006

Scale: 1:10,000
Derived from Lands and Surveys Department digital data.
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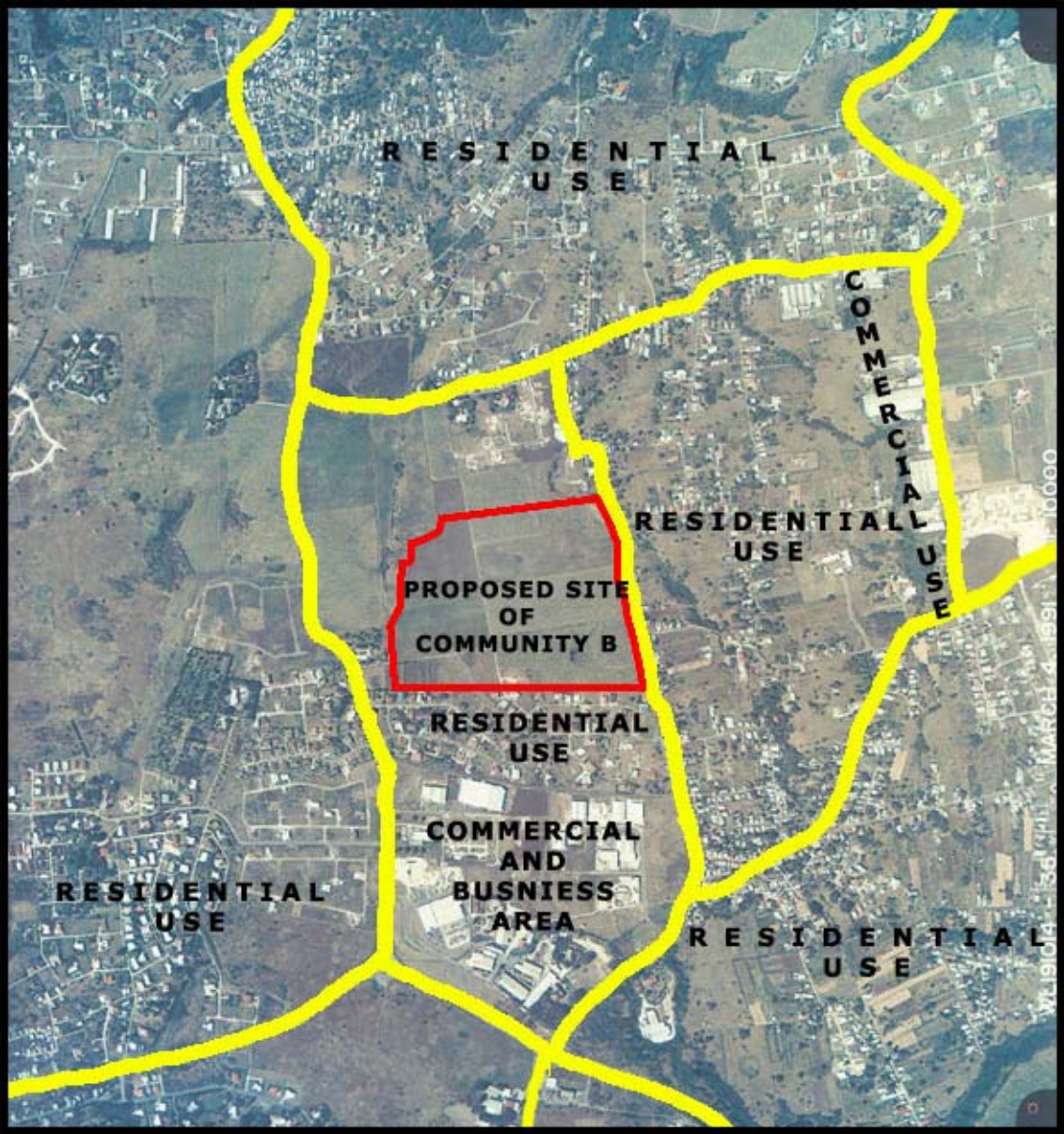


Figure 10 Land uses around Community B in 1991

Scale: 1:10,000
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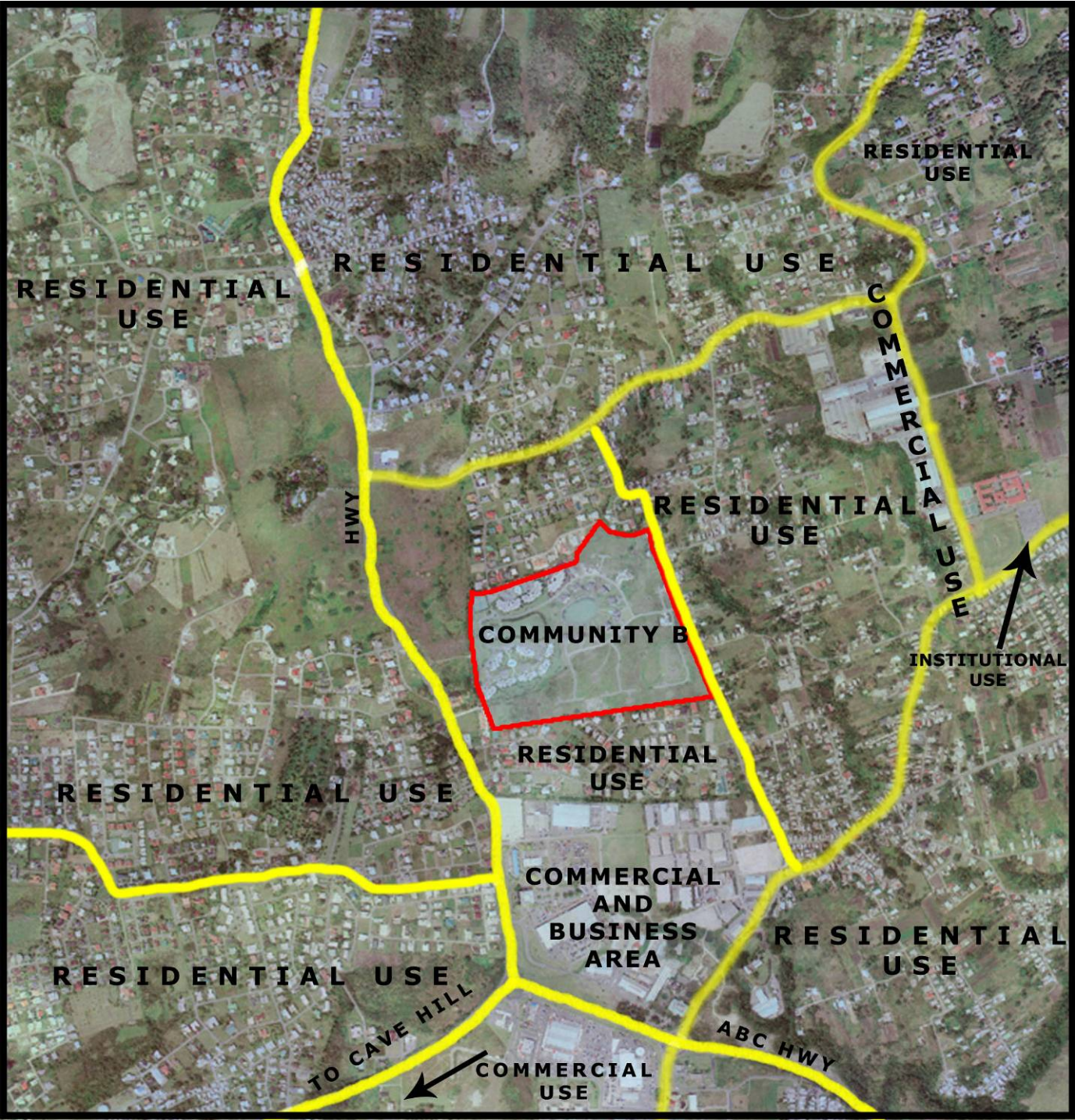


Figure 11 Land uses around Community B in 2006

Scale:1:10,000
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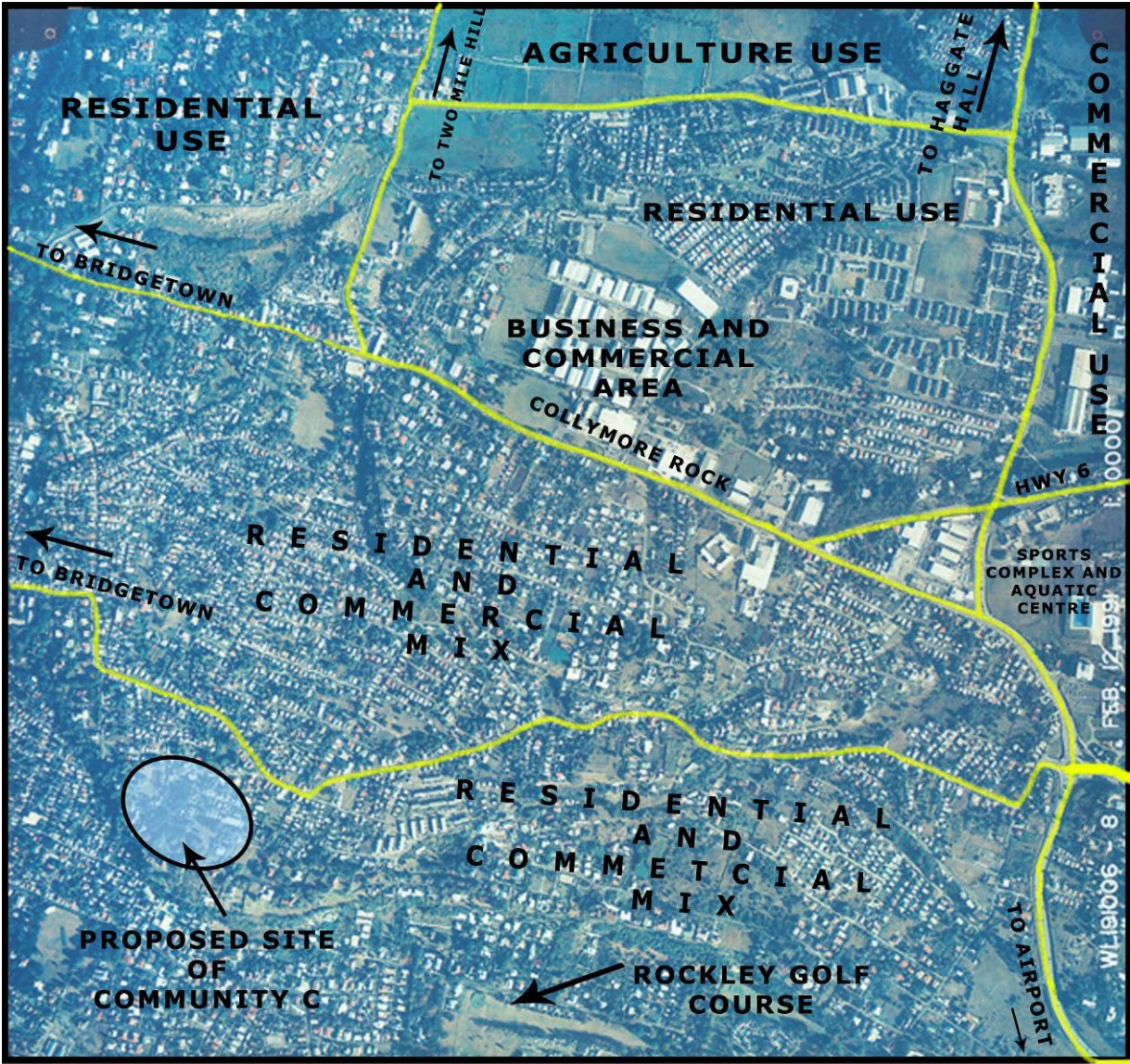


Figure 12 Land uses Community C in 1991

Scale: 1:10,000
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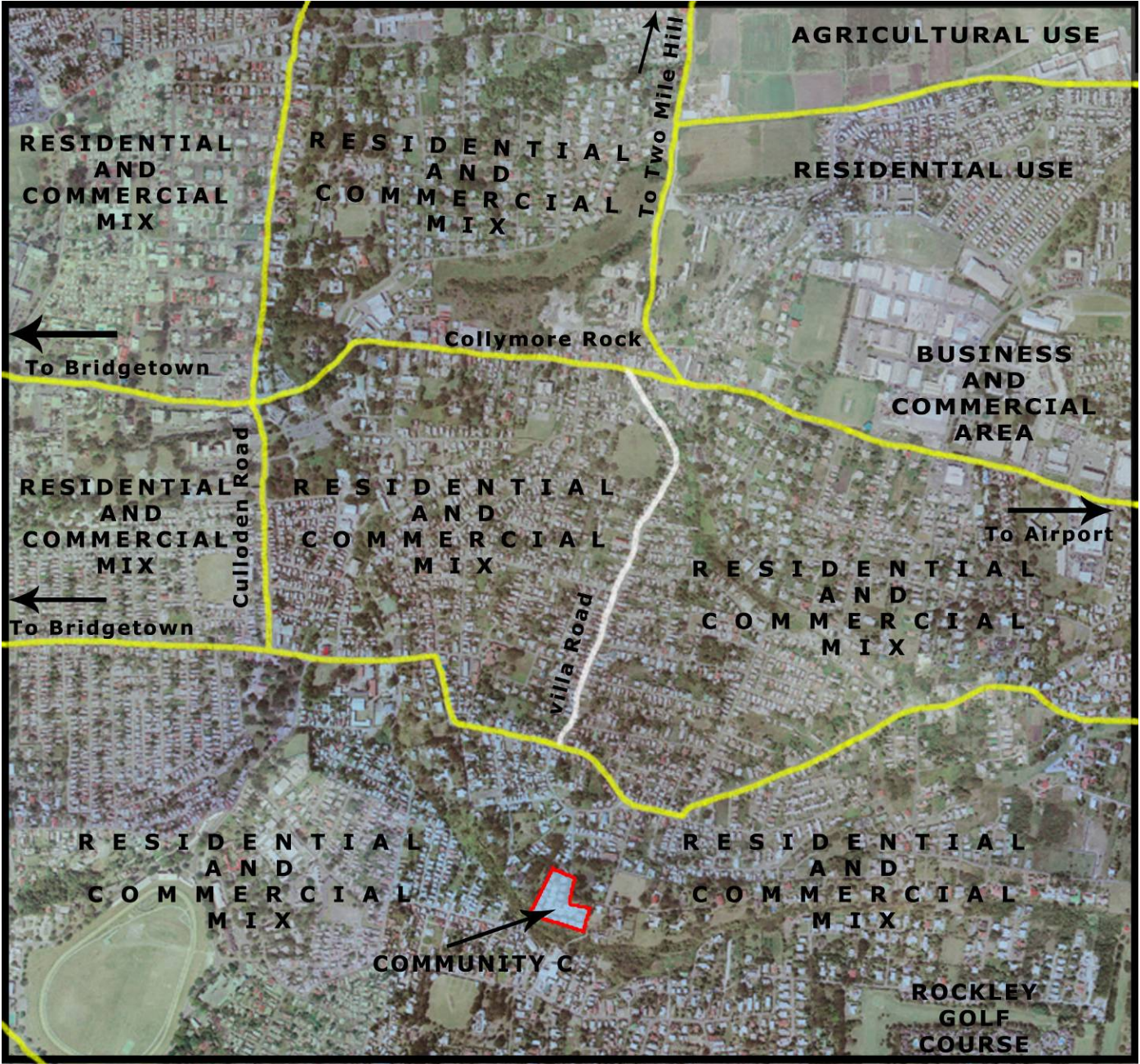


Figure 13 Land uses around Community C in 2006

Scale: 1: 10,000
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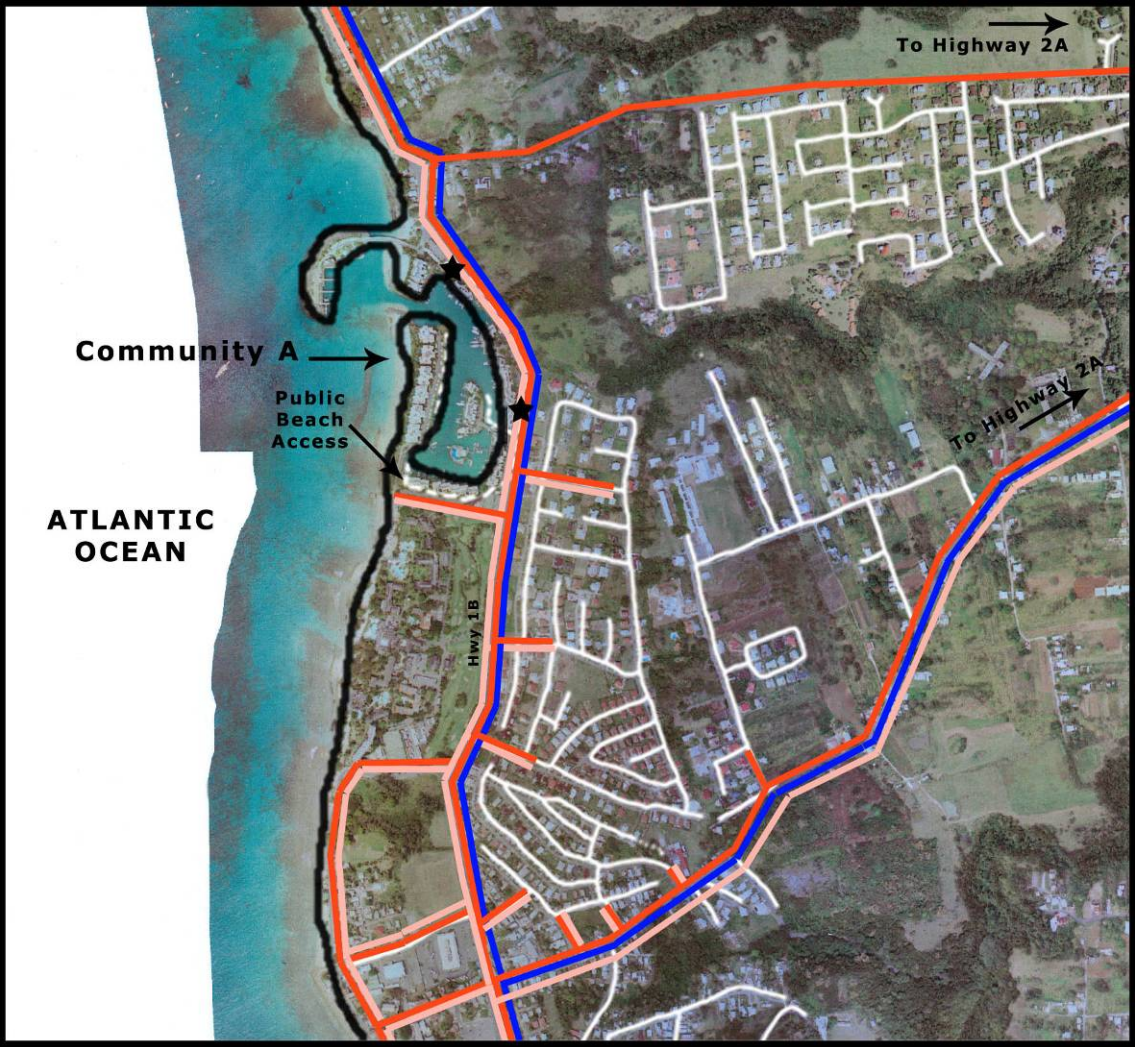


Figure 16 Travel behaviour of pedestrian,vehicles and puublic transit around Community A

Legend

- Pedestrian Traffic
- Vehicular Traffic
- Public transit
- ★ Entrance to Gated Community

Scale: 1:10,000
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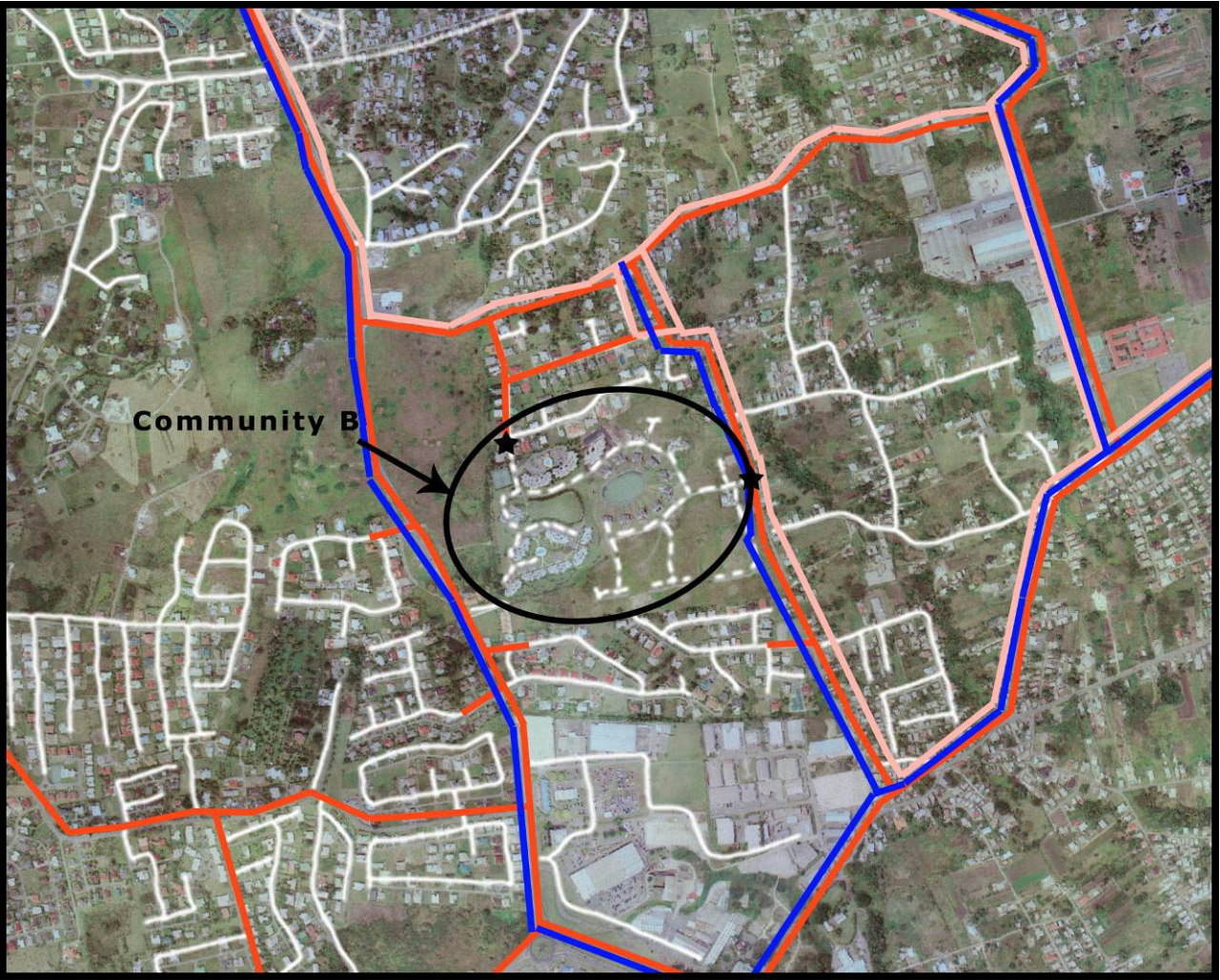


Figure 17 Travel behaviour of pedestrian, vehicle and public transit around Community B

Legend

- Pedestrian Traffic
- Vehicular Traffic
- Public Transit
- ★ Entrance to Gated Community

Scale: 1:10,000
Derived from Lands and Surveys Department digital data.
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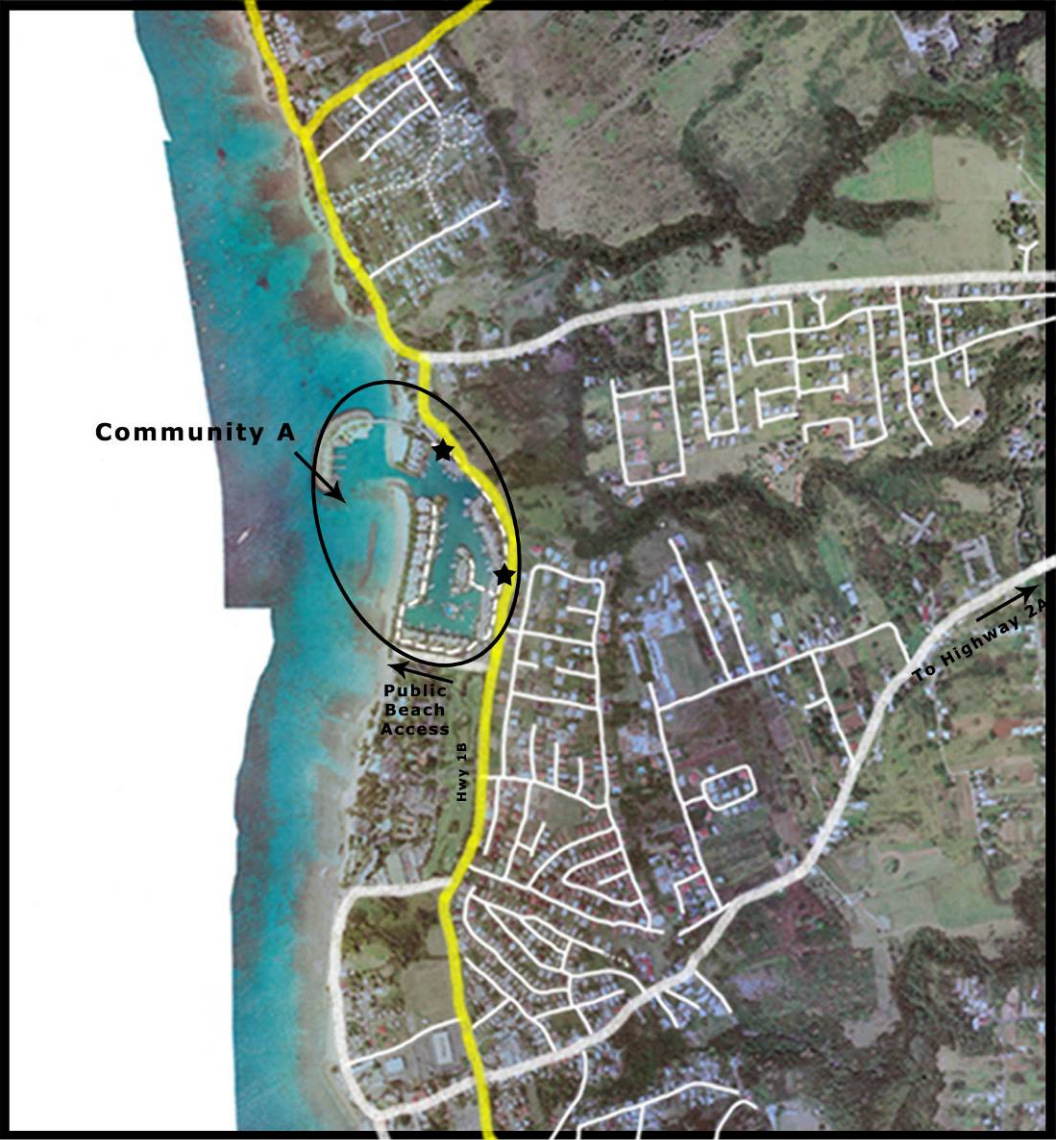


Figure 18 Road patterns for Community A and surrounding area

Legend

- Highway
- Secondary Road
- Residential Street
- Private Street
- Entrance

Scale: 1:10,000
Derived from Lands and Surveys Department digital data.
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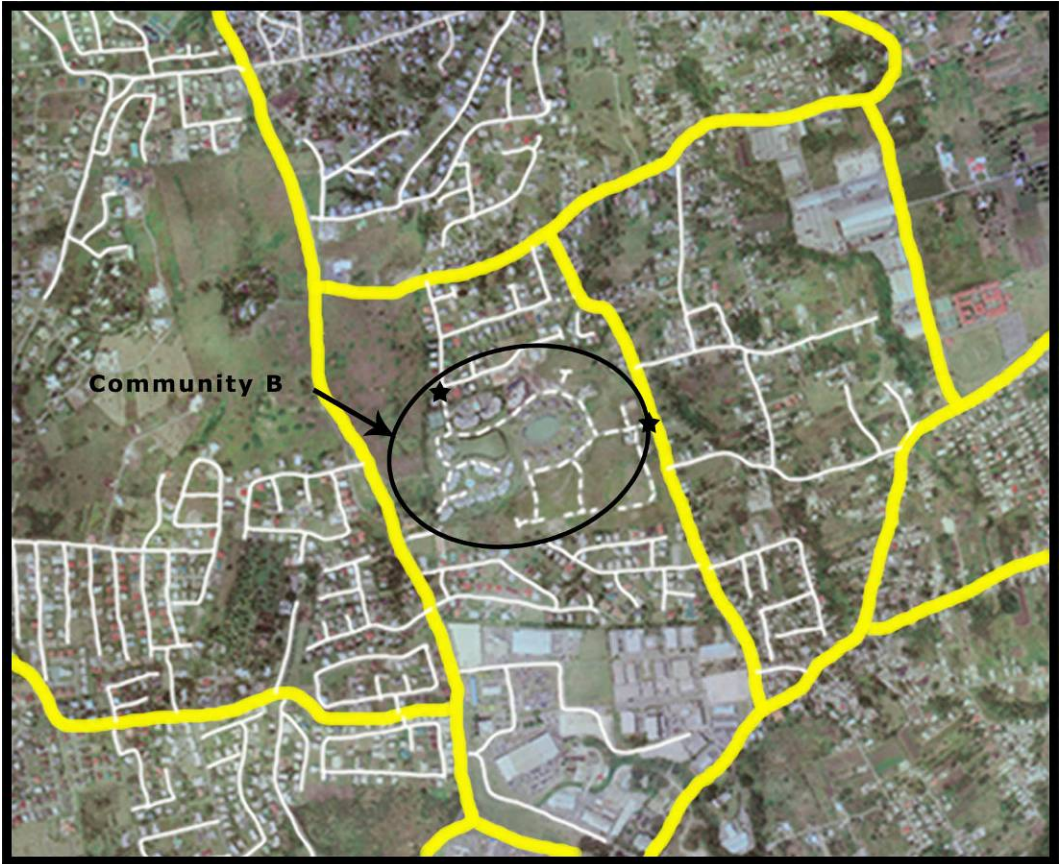


Figure 19 Road patterns for Community B and surrounding area

Legend

- Highway
- Secondary Road
- Residential Street
- Private Street
- Entrance

Scale: 1:10,000
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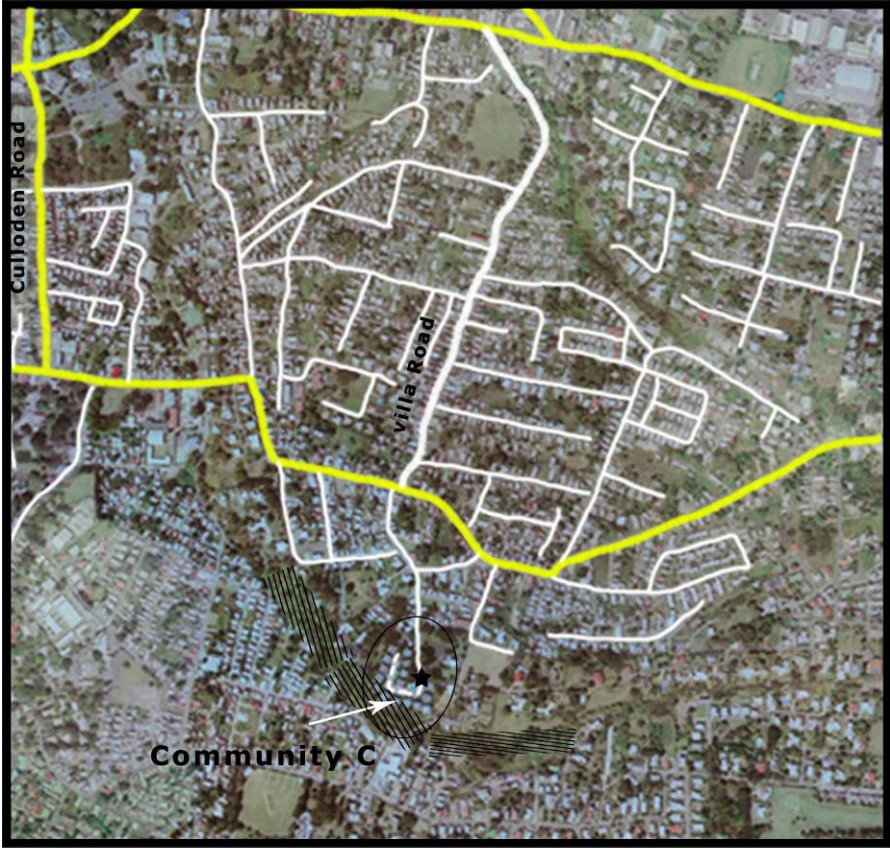


Figure 20 Road patterns for Community C and surrounding area

Legend

-  Highway
-  Secondary Road
-  Residential Street
-  Private Street
-  Entrance
-  Cliff

Scale: 1:10,000
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