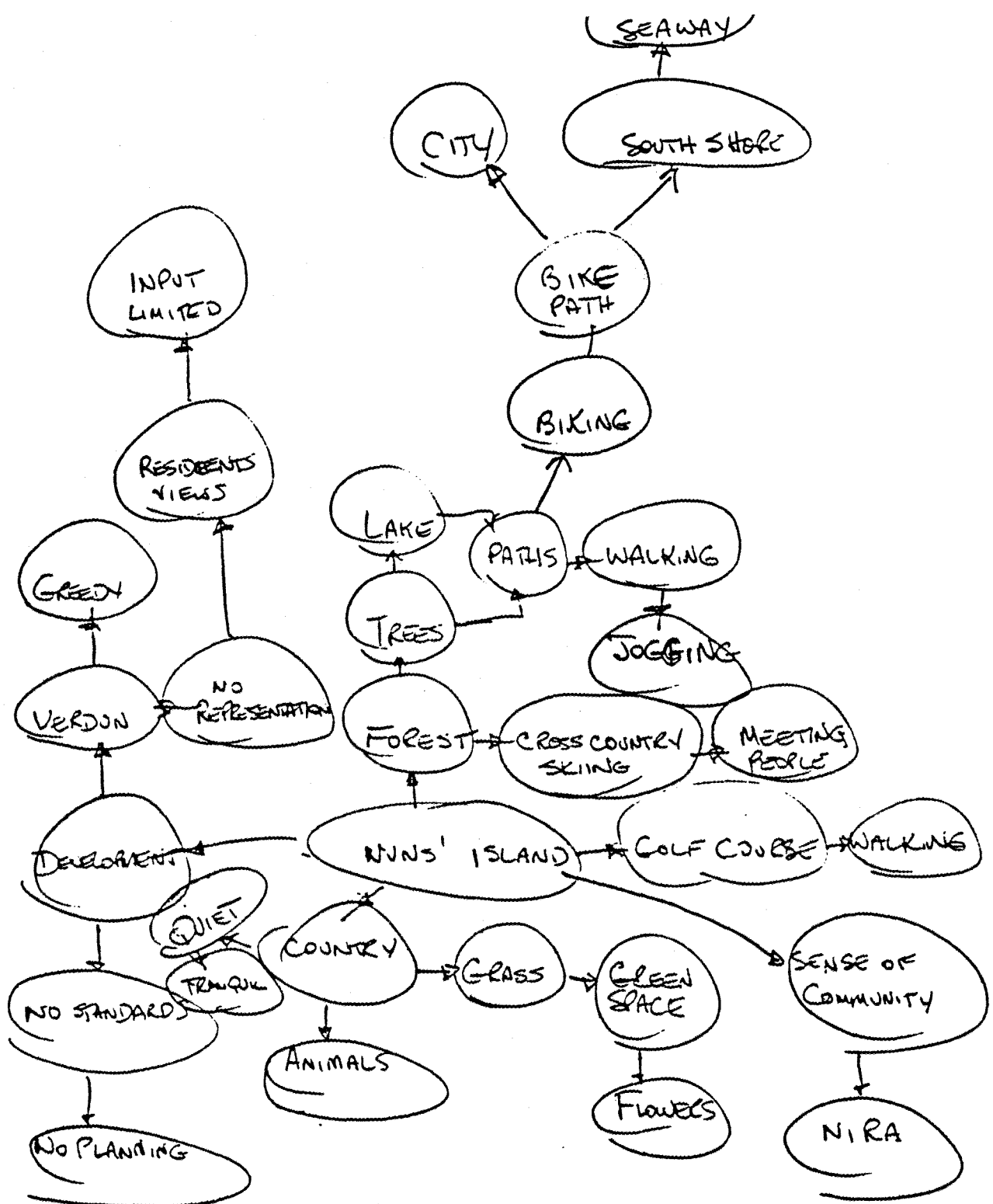


Dimensions of Quality in Residential
Environments: A Case Study of Nuns'
Island



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A CASE STUDY OF NUNS' ISLAND

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Abstract

This project is concerned with the relationship which people in medium to high density settings have with their outdoor environment. Particular attention is given to the perceptual and behavioural patterns of residents in five residential settings: owner occupied townhouses, rented townhouses, low-rise apartments, high-rise apartments and condominiums. A variety of research techniques including socio-economic analysis, site and behavioural analysis, structured and unstructured resident surveys and intuitive observation are applied to establish the extent to which alternative housing and community planning options are congruent with the values and expectations of residents. The research findings are used to elaborate performance measures which take into account several dimensions of residential quality. A land use control framework which may be useful in applying performance measures is outlined. The study focuses on Nuns' Island which forms part of the City of Verdun, Quebec.

Executive Summary

This project is concerned with the relationship which people in medium to high density settings have with their outdoor environment. Particular attention is given to the perceptual and behavioural patterns of residents in five residential settings: owner occupied townhouses, rented townhouses, low-rise apartments, high-rise apartments and condominiums.

The study focuses on Nuns' Island which forms part of the City of Verdun, Quebec. This community is an appropriate case study area because it contains a wide range of medium to high density housing options which are located in close proximity within a clearly identifiable community. As the Island was originally developed as a "New Town In Town" the study provides an opportunity to assess the relative merits of design features associated with the New Town Planning movement.

A variety of research approaches to residential quality assessment are briefly presented and discussed including: descriptive intuitive studies, physical and behavioural analysis, social indicator analysis, resident surveys, and psychological profiles. As each of these approaches has merit a composite research framework is developed for this study. The research framework focuses on the values, expectations and behaviour of individuals living in different housing contexts. Particular importance is given to the extent to which individuals can exercise some control over both their immediate outdoor environment and the overall community in which they are located.

Several techniques including socio-economic analysis, site and behavioural analysis, structured and unstructured resident surveys and intuitive observation are applied to establish the extent to which alternative housing and community planning options are congruent with the values and expectations of residents.

The results of the study indicate that differences in value orientation and attitudes vis a vis development options among residents of different housing environments are not substantial in this case study situation. Almost all residents shared similar images of their community as a "city in the country" and wanted those features which would promote this image retained in new development proposals.

A modified form of the classic Radburn Plan represented many of the qualities considered desirable in the planning of immediate outdoor space and the overall community. A mix of housing, pedestrian pathways and courtyards along with substantial natural areas were considered an appropriate model for medium to high-density townhouse, apartment and condominium development.

Some important modifications would, nonetheless, have to be considered in applying these principles elsewhere. Foremost among these is the need to more clearly define private, semi-

public and public boundaries. Residents feel uncomfortable when they are uncertain about their spatial rights and the appropriate behaviour for the setting. It is likely that effective definition of territories would promote use of the space and contribute to the enjoyment of all. Residents with direct ground floor access are most affected by these distinctions and tend to develop an elaborate array of "environmental cues" to establish their "ownership" over the space in front of their unit and control interpersonal interaction.

Almost all residents value having private outdoor space whether on a balcony or patio. This should be large enough to sit about 6 people comfortably irrespective of housing type. All would like to have some control over the level of privacy and environmental conditions (especially wind) of their private outdoor space. Some flexibility in design and perhaps, even more importantly, in the administration policies of the condominium association or housing authority, is therefore desirable.

Semi-public spaces can work well in both townhouse and condominium environments. In the case of owner occupied townhouses it is vital that a formal agreement to share space is made. Informal arrangements can be too easily upset by the decision of a single individual to fence in his or her yard creating a chain reaction.

Condominium residents value semi-public space for aesthetic qualities and the facilities provided. Swimming pools are highly desirable as community focal points within the semi-public space but need to be carefully located to limit noise disturbance. A carefully landscaped area, including amenities such as a gazebo and special attention to views add to the attraction of the space without creating a problem with noise.

Apartment tenants also value semi-public space for aesthetic and functional qualities. Many in the study area used this space as an extensive yard. While condominium residents are very concerned about non-members using their space and enjoy the exclusive nature of the environment, tenants are much more likely than condominium owners to accept the idea that the space around their building is a resource for the overall community - at least to the extent that people are welcome to use the public pathways and stop off in the courtyards.

"Wild" landscape, such as wooded areas are very much appreciated by residents and are well used.

The opportunity to participate in community development is vital to the feeling of satisfaction which people have with their neighbourhood. Most respondents in this study felt that an architectural and design review board which enjoyed the confidence of the overall community would provide the best structure to control development.

Based on the findings of this study, a number of residential congruence measures are elaborated. These are organized under the headings: vitality, sense, fit, access and control. These headings correspond with the performance dimensions developed by Lynch (1981) to evaluate the quality of human settlements.

Finally a land use control framework which may be used to apply performance measures is briefly discussed. This framework strikes a balance between control and flexibility.

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List of Acronyms

Quebec Home and Mortgage Corporation	QHMC
Metropolitan Structures Inc.	MSI
Nuns' Island Residents Association	NIRA
Montreal Urban Community	MUC
Central Business District	CBD

CHAPTER 1

INTRODUCTION

Chapter 1: Introduction

1.1 Scope and Objectives

This project is concerned with the relationship between people and their outdoor residential environment. Essentially the study focuses on perceptual and behavioural patterns which are associated with a variety of medium to high-rise housing options to establish the extent to which these options are congruent with resident expectations and behaviour.

The specific objectives for the study are:

- 1) to examine the value orientations and effectiveness of alternative residential performance assessment methods;
- 2) to evaluate the functional performance of several different environments with reference to varying notions of quality held by residents and the people-environment relationships which ensue; and
- 3) to develop a set of Residential Congruence Measures which may be used to enhance the effectiveness of traditional land use planning and design controls.

In the course of meeting these objectives the project assesses the functional performance of five alternative living environments which are available on Nuns' Island - owner occupied townhouses, condominiums, rented townhouses, low-rise apartments and high-rise apartments. As each of these housing options offer different trade-offs with respect to amenities and tenure, it might be expected that residents in each situation would have different perceptual and behavioural patterns with respect to both their immediate outdoor space and the community in which they live.

The research framework used to evaluate residential congruence for this study combines methods which are commonly associated with several distinct approaches to quality assessment including: physical analysis, social indicators, resident surveys, psychological profiles and descriptive intuitive techniques. Each of these approaches is briefly discussed in Chapter 2 which provides further details on the research orientation of this study.

The socio-economic characteristics of the study area are presented in Chapter 3. This is followed, in Chapter 4, with an analysis of the physical environment and the behavioural patterns of residents. Chapters 5 and 6 present the results of two resident surveys. The first survey was administered on the telephone by Sorecom Inc., a professional public polling company, to 400 residents selected in a random sample which was stratified

to provide adequate representation from households in each of the five living situations described above. A more detailed and probing interview was conducted by the research team in the homes of 60 of the respondents to the telephone survey. Together, these surveys provide extensive quantitative and qualitative information on the relationship between residents and their outdoor environment.

The research findings are used, in Chapter 7, to elaborate congruence measures which take into account several dimensions of residential quality. These measures describe development attributes which are congruent with the expectations of residents in positive, flexible terms. Finally, a land use control framework which may be useful in applying residential congruence measures is outlined in Chapter 8.

1.2 Case Study Selection

Nuns' Island, which forms part of the City of Verdun, Quebec, is an appropriate case study because:

- 1) it contains a wide range of medium to high density housing options which are located in close proximity within an identifiable community;
- 2) a large scale planned unit development incorporating many seminal architectural and site planning ideas associated with the Radburn movement is located on the island;
- 3) virtually all residents enjoy moderate to high incomes and are therefore able to choose the type of housing in which they wish live;
- 4) residents are aware of the range of housing options and environmental amenities which are available locally as the community is located on a relatively small island;
- 5) all of the parties with an interest in development issues - developers, residents, land owners, city officials and representatives of both the regional and provincial levels of government have been actively involved in the development process; and
- 6) the Island has served as a example of both good and bad development for architects and planners throughout North America.

The range of residential environments available on the Island include many innovative rental, owner occupied and condominium

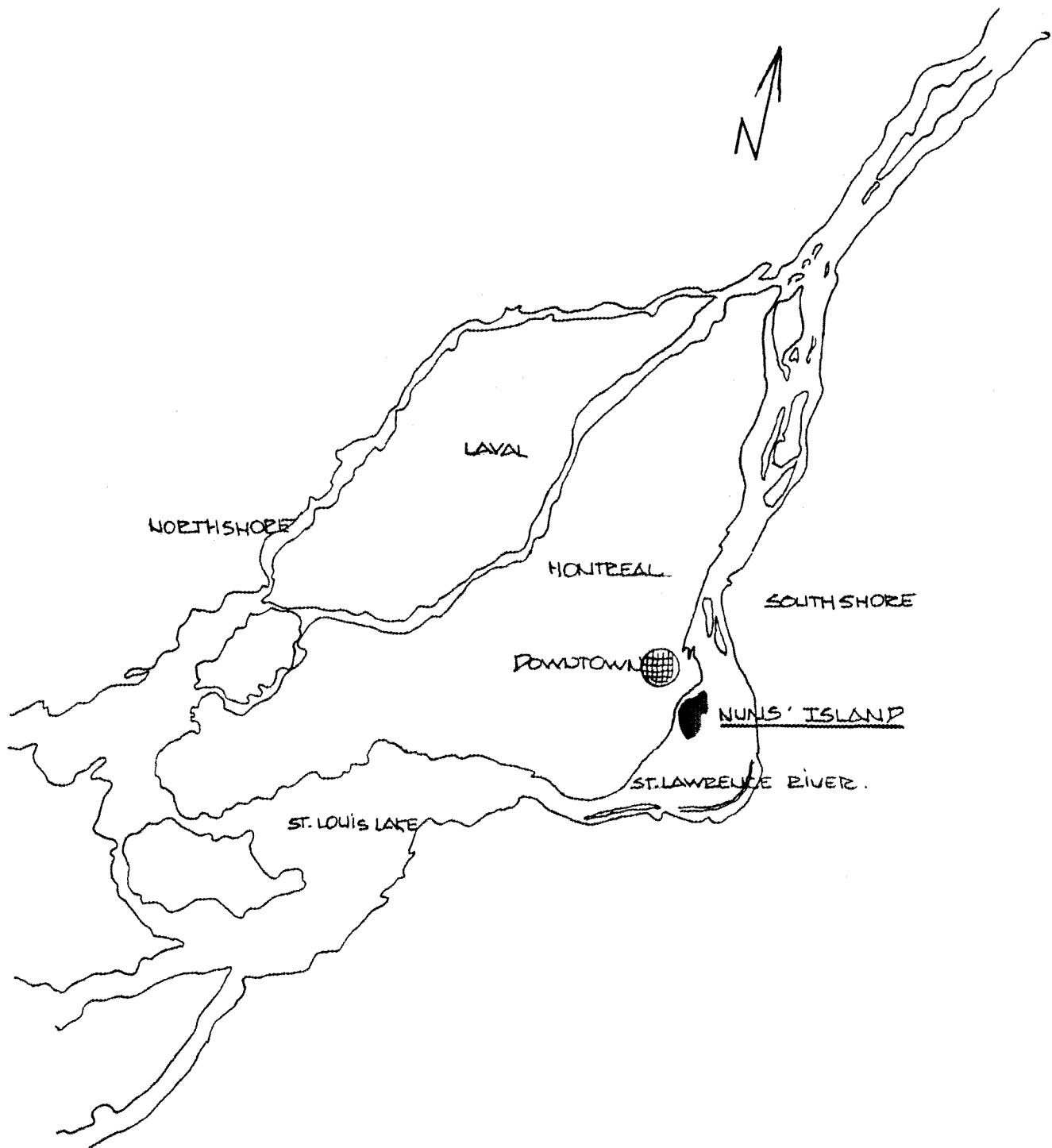
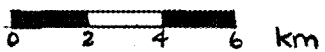


Figure 1: Location Map



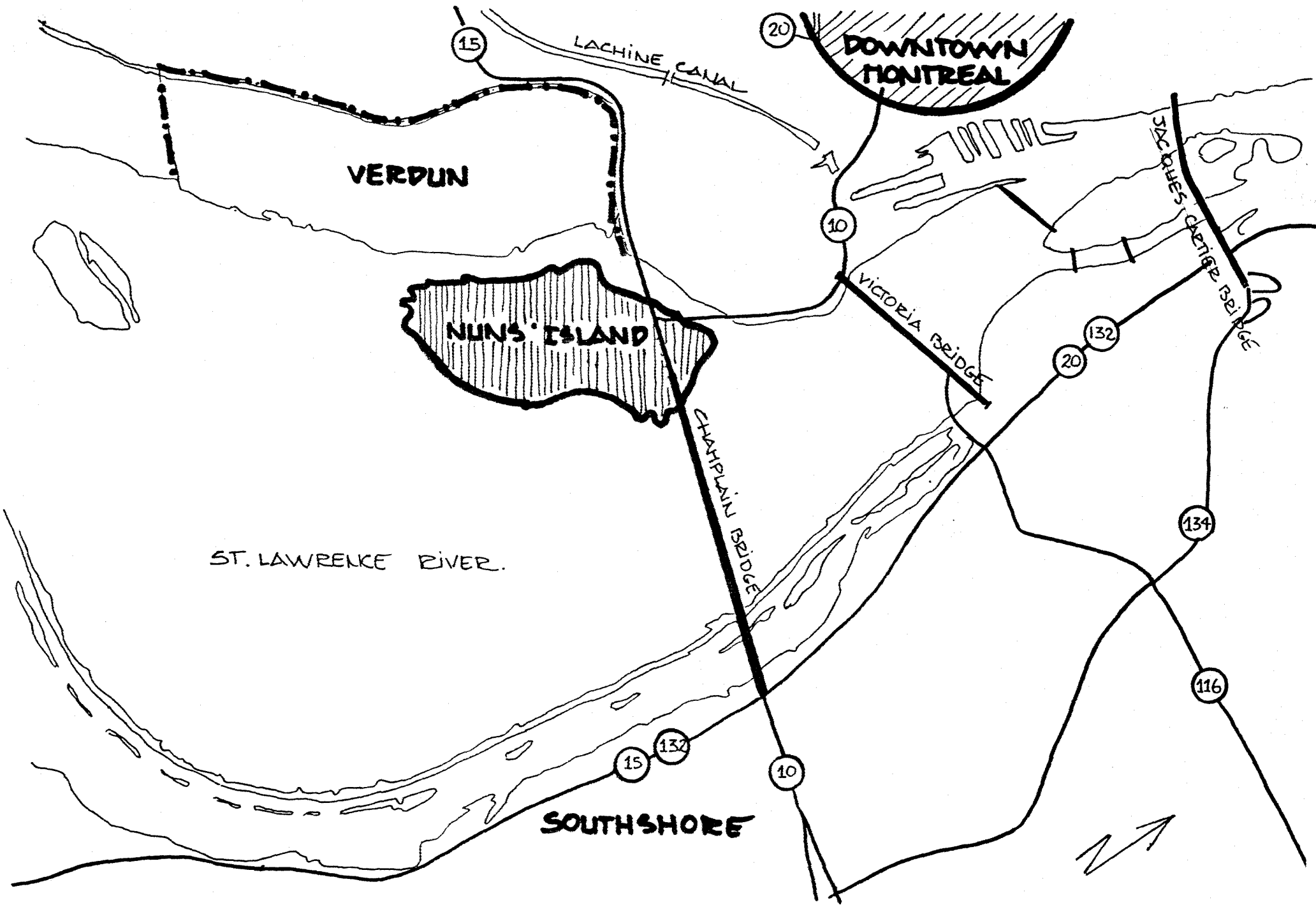


Figure 2: Local Context

Scale 1:50,000

projects. These provide an opportunity to explore one of the key issues in recent site planning practice - the allocation of private, semi-public and public space. Some residents have virtually no private or semi-public outdoor space. Others have balconies and share a semi-public space with their neighbours. Still others are residing in a park-like setting which is available to all yet incorporates subtle territorial cues to indicate appropriate behaviour. And some have small private yards. All of these options can be provided in current medium to high density residential areas elsewhere.

1.3 A Brief History of the Development of Nuns' Island

Interest in developing a residential community on the Island began in 1956 - one year before the Champlain Bridge was built - when Quebec Home and Mortgage Corporation (QHMC - now Les Investissements Ile-des-Soeurs Inc.) purchased what was then Ile St Paul from The Congregation of Notre Dame and it was annexed by the City of Verdun. The nuns had owned the Island for some 250 years during which time it was used as a pastoral retreat and farm.

It was not until 1965, however, when Metropolitan Structures Inc. (MSI) signed a 99 year lease with QHMC, that a serious development project got underway. Taking advantage of the fact that the Island contained substantial developable land under the control of a single owner and was within 10 minutes driving time of downtown Montreal, MSI prepared a plan calling for the construction of a "New Town In Town" housing approximately 45,000 people in 15,000 rental units by 1981.

The initial development (Phases I & II) largely lived up to expectations and a residential environment which is unique, at least to Quebec, was created. The early residential sectors include a harmonious mix of low and medium rise buildings, of 6 or fewer storeys, which share common courtyards, and are linked to recreational and commercial facilities by a pedestrian pathway system. High rise buildings, which were also linked to the pedestrian system, were located along the riverfront. Virtually all exterior space is accessible to the general community. Tenants of apartments and townhouses with ground access are accorded only small patios which are separated from the semi-public and public domains by subtle landscape elements such as indicative planting and slight changes in elevation.

Unfortunately changing market conditions and rental legislation limited the intended development of the Island and by 1978 only 3,100 dwelling units had been built. Consequently MSI and QHMC reached a new agreement which enabled other developers to buy land for "for sale" development.

There proved to be a market for owner occupied units and more than 1,000 condominium, townhouse and semi-detached units were completed by January, 1986. In the process, however, it became clear that the existing zoning bylaw did not provide sufficient

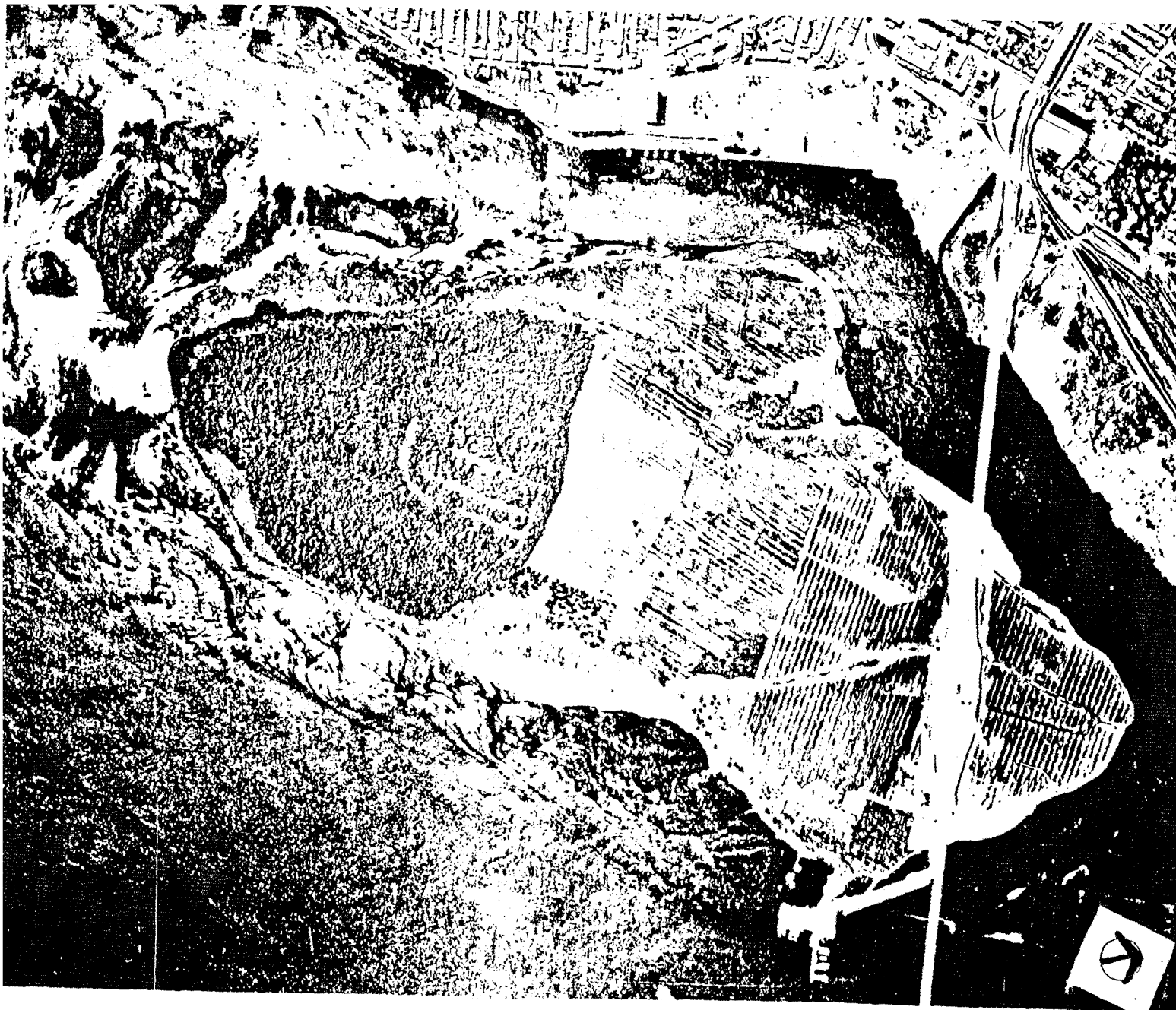


Figure 3: Nuns' Island Prior

To Development

Scale 1:5,000

guidance and control for small scale projects by different developers. Common complaints with the new development include: a poor circulation pattern; a lack of architectural harmony; elimination of public access to the riverfront; and the lack of pedestrian pathways and parks.

Concern with recent development on the Island was sufficient to create serious rifts between the key actors with a stake in the development process: MSI, QHMC, the City of Verdun and the Nuns' Island Residents Association (NIRA). These rifts were strengthened by the complaints of new property owners concerning services, taxes, building quality and environmental amenities. Two specific issues served to coalesce views: the construction of a new condominium project which blocked the view of residents of another condominium and pressure for development in a wooded area.

These issues led to the City of Verdun's recognition of the need for a new plan which took into account the radical change in development concepts. A planning firm was engaged but controversy over the forest issue (which the plan sought to protect) and the rigidity of the zoning proposed led to its failure to win approval. While NIRA offered qualified support for the plan as it would protect the forest and provide a basic development structure, the association joined MSI and QHMC in opposing the enforcement of traditional "as of right" land use controls which would not provide sufficient flexibility for innovative planned unit development which was comparable in quality to Phases I and II. While the municipal council welcomed the more clearly defined development guidelines and in principle supported protection of the forest, their concern with tax revenues resulted in their support for a new project which was to be located in the "heart" of the forest. Controversy over this project led to inclusion of the forest in an interim development control bylaw passed by the Montreal Urban Community (MUC) in September, 1983.

Following rejection of the zoning plan MSI elected to prepare its own plan in consultation with the City. Both NIRA and QHMC became involved and a series of meetings with representatives of all four parties took place which provided an informal development review process for specific projects but failed to produce a plan.

Vigorous confrontation between residents and development interests erupted again in the spring of 1985 when a 2,000 unit project was proposed for the golf course. While the City attempted to sooth feelings by engaging a consultant to prepare a comprehensive plan and by holding public hearings, residents were not swayed. A series of unsuccessful court challenges were launched by NIRA in an attempt to block the project.

Currently a new plan and zoning bylaws are being prepared. With the fate of the golf course decided attention has returned to the forest which is no longer protected from development by the MUC.

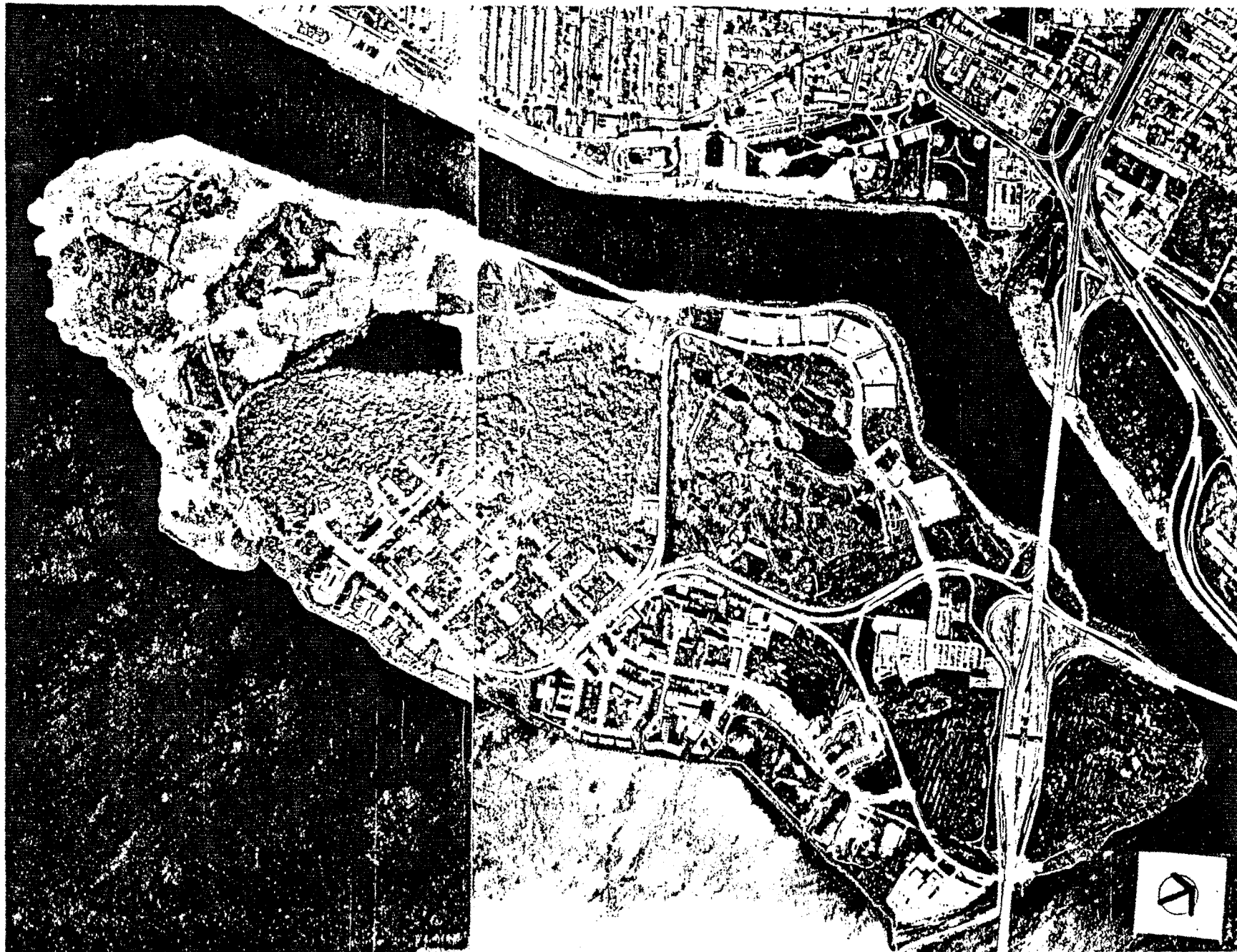


Figure 4: Nuns' Island in 1983
Scale 1:5,000

A variety of options, involving the participation of different levels of government are being considered.

Throughout the recent development period public attention has focused on large issues which were often viewed in black and white terms. It is hoped that, in addition to meeting more general objectives, this report may provide an avenue for constructive debate of subtler planning issues among all parties with an interest in the development of Nuns' Island.

CHAPTER 2

REVIEW OF THE LITERATURE AND STUDY APPROACH

Chapter 2: Review of the Literature and Study Approach

This chapter presents an overview of the different research approaches which have been used to evaluate residential quality and discusses the analytic framework used for this study. Specific reference is made to five distinct approaches - descriptive/intuitive, physical analysis, social indicators, resident surveys and psychological profiles. While there is some overlap among these classifications it is argued that there is sufficient clustering in the literature to justify the categories. Elements of each of these approaches are incorporated in the composite approach developed for this study.

2.1 Value Perspective

All research has a value perspective whether or not this perspective is explicitly stated. Frequently this perspective is inherent in the analytic methods selected as the selection of what to measure and how to measure it greatly influences the results which are obtained. The central values behind this research project reflect the normative view which Lynch eloquently expresses in A Theory of Good City Form:

"The fundamental good in the continuous development of the individual or the small group and their culture: a process of becoming more complex, more richly connected, more competent, acquiring and realizing new powers - intellectual, emotional, social and physical." (Lynch, 1981, p. 116)

The insistence on the dynamic relationship between individuals or small groups and the environment in Lynch's notion of quality has a number of methodological implications. First, it is imperative to employ a very broad definition of the word "environment" which embraces natural, built, social, cognitive and sensual elements. Second, emphasis must be placed on the sense of identity or affiliation which people have with their environment. Third, it is important to consider the degree of control which individuals have over their environment and especially the processes by which change occurs.

There are relatively few residential quality studies which attempt to respond fully to these considerations.

2.2 Research Approaches

2.2.1 Descriptive / Intuitive Studies

The "descriptive/intuitive" category includes an eclectic group of approaches which rely on independent judgment, inspiration, or intuition and are generally not empirically verifiable. Here the key source of data is the individual observer who evaluates the

qualities of his or her experience based on personal perceptions and feelings.

The different approaches relevant to this category may be distinguished in terms of the method chosen to communicate valued experiences to others and the degree of structure in the analysis. Some may simply declare that certain settings are more valuable than others and justify this conclusion on revelation, abstract aesthetic notions or personal values. For example, the location and form of the traditional Chinese City was inspired by an image of the cosmos (Tuan, 1974).

Other researchers rely on effective prose to communicate the essence of environmental quality. Here as Dyos (1969) suggests, novelists may be best equipped to present an effective holistic description. A more structured approach used by anthropologists, ethnographers and participant observers such as Mead (1929) and Gans (1962) combines observation and survey techniques with personal values to portray socio-physical patterns (Ittelson et al., 1974).

This approach to quality assessment is often wonderfully successful in identifying key processes and components. Vivid descriptions of life in urban neighbourhoods which communicate a "feeling state" rather than chunks of data frequently "strike a cord" with others. Jacobs (1961) builds on this approach most effectively in her analysis of neighbourhoods. Further, skilled urban designers employing a design process which cannot be duplicated by scientific methods, are able to develop concepts which synthesize the needs and aspirations of the general population.

By not fragmenting experience into "value free" particles these eclectic approaches often offer intuitive insights which are not attainable with more structured approaches. The lack of empirical tests and reliance on individual points of view, however, limits the utility of the approach in many planning situations. Planners are then left seeking "facts" to validate values intuitively acquired. A variety of consensus seeking techniques, such as delphi surveys and game playing are available to provide a firmer basis for decision making.

2.2.2 Physical and Behavioural Analysis

In this report "physical analysis" refers to the evaluation of the quality of both the natural and built environment. However, the methods used in each vary significantly.

Physical environment studies at the neighbourhood level have typically focused on nuisances. Air and water pollution, natural hazards (earthquakes, floods) disease, climatic comfort, noise and vibration have received considerable attention (cf. Detwyler et al. 1972). These concerns are complemented by other measures of physical quality such as traffic conditions, housing quality, maintenance, open space availability and so on. (cf. Lynch 1981, Appendix C)

While each of these environmental components form part of a dynamic system and are amenable to analysis in process terms, sectorial and static analysis procedures predominate. Experts are generally relied on to identify relevant environmental components, conduct measurements and set standards. Environmental indices comparing measurements to standards are used to represent levels of quality.

In recent years, considerable attention has been given to human aspects of environmental issues. Extensive research has been conducted relating to psychological processes governing perception, assessment, and coping strategies with respect to environmental "stressors" (Jacoby, 1972; Ittelson et al., 1974; Stokols, 1978). Here the quality of the physical environment is contingent on interactive relationships between people and environment (cf. Baum et al., 1981) and not simply on an overall index.

In addition, environmental symbolism has received considerable attention by many researchers. Mumford (1961), for example, notes that the primary determinant of urbanization may have been the mystical significance of particular landscapes. This theme is further explored by Yi-Fu Tuan (1974) who examined the emotive and symbolic relationship between people, built form and landscape in diverse cultures. And a host of scholars have elaborated on the nature and importance of this dimension in planning communities (cf. Relph, 1976; Lynch, 1960; Appleyard, 1981).

The systematic observation of the behaviour of people has contributed greatly to the understanding of residential quality. Zeisel (1981) reports on a number of studies which either observed the physical traces of behaviour, such as litter, or behavioural patterns directly. Extensive research in this area by Sommer (1969), Hall (1966), Barker (1968), Ittelson et al. (1974) and others have helped identify consistent environment-behaviour patterns. This type of analysis is essential to compliment resident interviews as respondents can not be relied upon to do exactly what they say they do. Often these observations reveal environmental relationships which are not otherwise evident.

2.2.3 Social Indicators

A substantial amount of research has focussed on the development of social quality of life indicators (Knox & MacLaren, 1978). These studies typically attempt to avoid the intrusion of values in the analysis by defining measurable components. For example, a study of the quality of life in Canadian cities considered "objective" measures of a number of variables relating to social development (eg. number of criminal code offences per 1000 population); economic development (eg. average disposable income) and physical development (eg. new housing units constructed) (Stewart et al., 1975). By providing explicit measures of quality factors this type of analysis facilitates the identification of problem areas and monitoring of conditions over time.

The use of social indicators as quality of life surrogates is controversial. Campbell et al. (1976), while acknowledging the useful role of objective indicators, suggest that they are objective only in the sense that they can be readily defined and measured. The entities amenable to this procedure may not adequately reflect the subjective life experience. The choice of both indicators and standards is strongly influenced by the social and physical context (Baer, 1976). Moreover, the measures themselves are often imprecise due to factors such as the under-reporting of crime.

A further problem area relates to the aggregation and interpretation of indicators. Many studies rely on a simple comparison to average conditions. Here for example, education levels which are higher than average are considered implicitly to be more valuable. However, while relative values are informative further study is needed to establish their relationship to "quality". Finsterbusch and Greisman (1983), for example, conducted field surveys to validate use of two indicators, length of residence and vacancy rate, to provide an initial description of neighbourhood quality. Attempts have also been made to develop dynamic models to better reflect the interrelationships between actors and environmental components.

In spite of their limitations social indicators offer significant advantages. Their explicit nature does permit temporal and spatial comparisons. In addition, they provide an alternative to individual assessments. Just as local politics does not always adequately consider regional or long range issues, objective measures may highlight issues relating to a general concept of "neighbourhood" which are not perceived by local residents. Further research may increase the reliability of objective measures as surrogate indicators of quality of life.

2.2.4 Resident Surveys

The difficulties inherent in conducting reliable objective measures of quality have led to substantial research on quality of life assessments by individuals. Such assessments have been found to vary with respect to personal characteristics (Marans and Rogers, 1975) circumstances, including life cycle (Michelson, 1977) future expectations (Michelson, 1980) and value orientations (Campbell et al., 1976). These considerations are explicitly included in the "Community Satisfaction Model" developed by Marans et al., (1981).

One of the more elaborate inquiries into the notion of quality of life was conducted by Campbell et al. (1976). This study defined quality of life experience primarily in terms of satisfaction and developed an extensive questionnaire designed to reveal how satisfied individuals were in general and with respect to 15 specific domains dealing with issues such as health, marriage, standard of living, housing and neighbourhoods.

While structured social surveys present a useful complement to social indicators they have also been subject to extensive criticism. A key concern is whether survey responses obtained in an artificial social situation and which are almost exclusively cognitive in nature properly reflect the life experience of the respondent. It is possible that structured questionnaire responses will have little correspondence with either emotive experience or actual behaviour.

A broader appreciation of the environmental experience of people may be gained via more interactive interview techniques. For example, Zeisel (1981), describes some of the techniques of "focussed interviews" in which the interviewer uses probes to encourage the respondent to provide more information about perceptions, feelings and behaviours.

Other techniques which have been frequently used to probe beyond the responses to structured questionnaires include cognitive mapping (Downs and Stea, 1973; Lynch, 1960), additions to base maps, freehand drawing, evaluation of photographs and interactive games (Zeisel, 1981).

Personal accounts of the quality of life experience are vital in quality assessments. They are, however, bound to be limited by the mode of research. Questionnaires typically rely on cognitive appraisals which may not tap the full depth of feeling and may in fact yield results which are contradictory with behaviour. A complementary approach is to employ behavioral observation techniques (eg. Ittelson et al., 1974) and supplement this with respondent comments.

2.2.5 Psychological Profiles

A further approach to understanding the notion of urban environmental quality is to rely on the expanding body of theories describing psychological processes. If it can be shown that human experience is enhanced by the availability of particular circumstances and resources regardless of whether they are "appreciated" by people, then desirable socio-physical attributes may be identified.

One of the most useful and generally accepted theories of this nature is that proposed by Maslow (1968). Essentially this theory suggests that individual needs may be represented as a hierarchy with discrete steps for (1) physiological needs, (2) safety (predictability and dependability of the environment) (3) belonging and love; (4) esteem; and (5) self actualization. The first four levels are considered basic needs which if not met may result in neuroses or, at least, an inability to grow further. Healthy people have sufficiently gratified their basic needs and are "motivated primarily by trends to self actualization" (Maslow, 1968, p. 25).

Maslow has also suggested that every individual "clings to safety and defensiveness out of fear" and yet is impelled "forward

In presenting this model Altman argues that privacy, which he defines as selective control of access to the self, is a key element in the general psychological well-being of individuals. (Altman, 1975) The regulation of privacy sets boundaries between the self and the social and physical environments. This regulation process is fundamental in establishing self identity and may contribute to a sense of self worth. The concept is considered to be universal, although individuals in different cultures attempt to regulate their degree of privacy in different ways. (Altman & Chemers, 1984)

As indicated in Figure 5, one of the key ways in which privacy is regulated is through the establishment of territories. Researchers have distinguished between three types of territories: private space, semi-public space and public space which are associated with different behaviour. Private spaces are owned and controlled by individuals or small groups. In providing a safe retreat they fulfill a central psychological function. The sense of belonging to a group is enhanced by semi-public space which may formally exclude others, as in the case of common areas in a condominium or impose less formal controls over access, as in the case of a local pub. Finally, public space, which is usually open to all people who observe general social rules, provides not only access to a variety of functions but also fulfills the essential social role of information exchange. All three types of spaces are vital.

The ability of individuals to establish, control and use private, semi-public and public space depends on a number of factors. Many of the key elements are central to the "Ecological Model" (Fig. 6) which Lawton and Nahemow (1973) developed to explain the ways in which the relationship between people and the environment may affect their attitude and behaviour. Here affect and behaviour are seen to be a function of personal competence to perform a specific task such as climb stairs and the level of difficulty or press imposed by the environment such as the number and type of stairs which must be climbed to access a dwelling.

The "Ecological Model" incorporates a normative perspective with the best possible fit between competence and environmental press being achieved when the demands of the environment match or slightly exceed competence levels. This congruent person-environment relationship is preferable as the individual is challenged to do his or her best. In contrast excessive environmental demand for a given competence level leads to stress with accompanying negative affect and maladaptive behaviour, while insufficient environmental press may lead to boredom and eventually loss of competence.

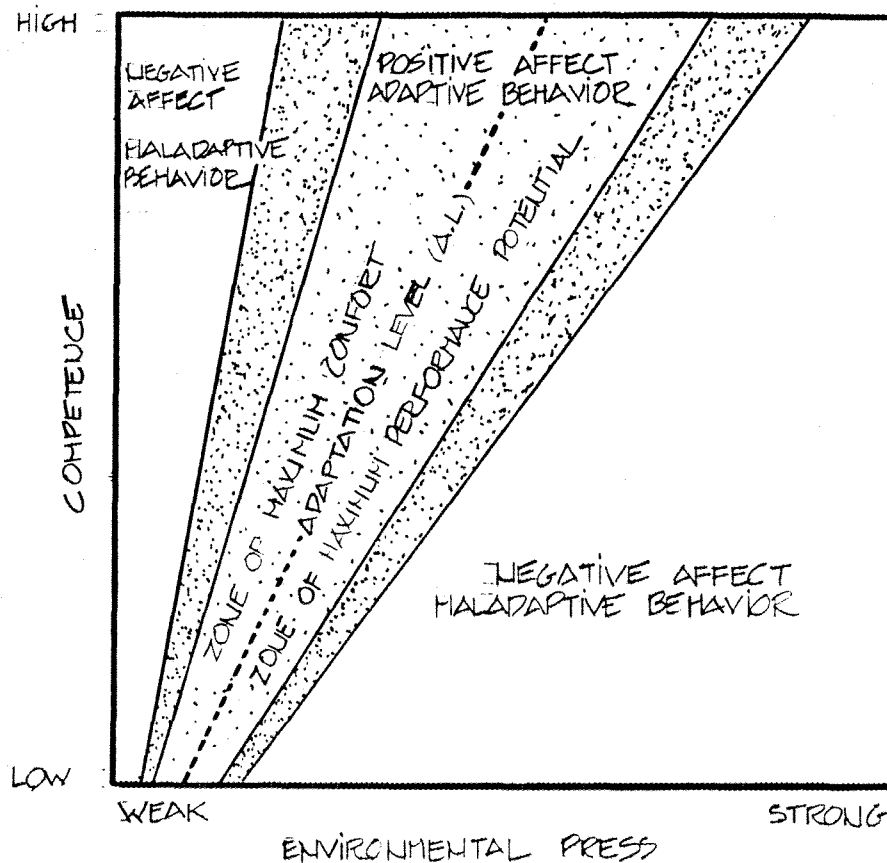


Figure 6: The Ecological Model (Lawton & Nahemow, 1973)

While this model offers designers a way of thinking about a project in terms of people-environment relations it is also fraught with difficulties as individuals may have varying levels of competences with respect to different tasks and may experience rapid change in any particular area of competence. The only way to cope with these difficulties is to provide a flexible environment with considerable latitude in environment press.

Environmental psychology theories are attractive in that they provide a means of evaluating environmental quality in process terms without isolating and aggregating questionable variables or relying on the accuracy of self reports. At best they provide a way of conceptualizing the dynamic interaction between people and their environment and provide guidance as to the nature and components of desirable environments. However, it remains necessary to identify and measure various indicators and components to apply a psychological model such as Lawton's environmental press concept in practice. Typically this analysis relies on self reports, personal interviews, behavioral observations and physical measures.

2.3 Research Approach for this Study

The present research framework, which is illustrated in Figure 7, draws on elements of all of the basic approaches discussed above. In this model personal characteristics refer to demographic variables such as age, gender, income and the household composition of respondents. These factors, together with standards of comparison, such as previous residential experience, values and initial expectations of the current residential environment influence the way in which the objective environment is perceived and the characteristics of a desired residential environment.

The level of satisfaction with the residential environment is a function of the discrepancy between the desired and actual environment. This discrepancy, however, is influenced by the extent to which individuals are able to modify their environment to meet their specific needs. The ability to modify the environment is in turn influenced by the respondent's sense of personal effectiveness and the malleability of the environment.

Low levels of satisfaction may lead to attempts to acquire more power to make desired changes or the decision to move. Efforts to increase effectiveness may include joining a citizens' group as well as physical changes to the environment which are under the personal control of the individual. When the level of dissatisfaction is high and residents do not feel that satisfactory changes can be made they move - thereby changing the personal characteristics of those in a particular housing environment.

The level of residential congruence is considered to be the degree of fit between resident expectations and behaviour and the immediate outdoor environment. In deference to the notion of "becoming" highlighted above, the extent to which people feel they may make changes is considered important in itself whether or not changes are actually made.

Finally, the feasibility of preparing land use controls which reflect the residential congruence measures and provide formal controls over the "objective environment" and the planning process itself is considered.

Each of the research approaches discussed above contribute to this study. The "objective environment" was assessed using methods derived from the literature on physical analysis, social analysis and behaviour studies. The personal characteristics of residents, their standards of comparison, satisfaction and preferred development options were established based on a structured resident survey administered to 400 respondents over the telephone. Details concerning desired and actual outdoor environments were gathered via focussed interviews with 60 respondents. These detailed questionnaires incorporated probes concerning the use and modification of outdoor space, cognitive maps and cluster diagrams. Finally, the interpretation of the results of these inquiries and the development of residential congruence measures

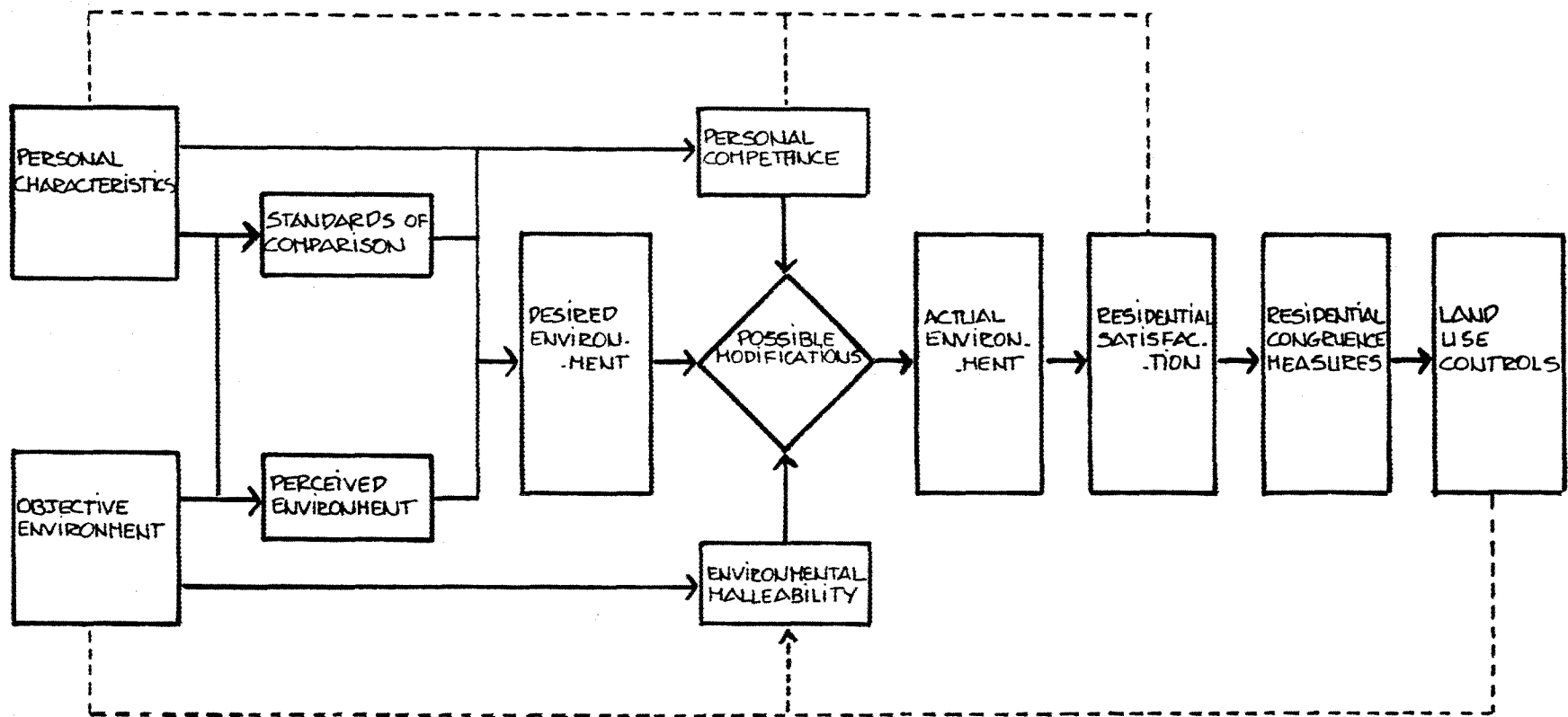


Figure 7: Research Approach

draws on the person - environment theories presented in the "psychological profile" section and the descriptive / intuitive approach.

CHAPTER 3

SOCIO-ECONOMIC CHARACTERISTICS

Chapter 3: Socio-Economic Characteristics

This chapter presents an overview of the socio-economic characteristics of the population of Nuns' Island. The analysis is based on census data for 1981 as the 1986 data is not yet available at the census tract level. While significant shifts in the socio-economic characteristics of Island residents have doubtlessly occurred due to the increase in the number of owner occupied townhouses and condominiums on the Island, it is possible to suggest what some of these changes might be based on the results of the resident surveys which were conducted for this study.

The 1981 data (Table 3.1) provides a very clear portrait of the population at that time. Island residents were well educated adults between 25 and 44 years of age who worked in managerial and technical occupations and earned substantially more than the median income for the region. Almost all residents were renters and highly transient. The percentage of divorced people and residents living alone was also very high. There were, as well, however, a number of young families who, given the low percentage of teenagers, tended to move off the Island when their children got older. Many were born in countries other than Canada - resulting in a cosmopolitan population. A higher proportion of English speaking people than would be expected lived in the community.

The results of the resident surveys completed in June 1986 (see Chapter 4) indicate that the socio-economic characteristics of current Island residents differ from the regional norms in much the same way as the 1981 data. The population continues to be wealthy, well educated and likely to work at managerial or technical occupations with a very high percentage of people living alone.

The possibility of home ownership on the Island, has nonetheless affected the demographic profile. More families with older children and elderly people live on the Island than was the case in 1981.

Table 3.1 Socio-Economic Characteristics in 1981

	Montreal Metropolitan Area	Nuns' Island
Population 1981	2,828,349	5,789
00-09	12.7%	10.5%
10-19	16.2%	7.7%
20-24	10.0%	7.3%
45-64	20.8%	16.9%
65+	9.2%	4.1%
Marital Status		
Total 15+	2,237,550	4,915
single	30.1%	30.1%
married	60.5%	58.2%
widowed	6.2%	2.7%
divorced	3.3%	8.9%
Mother Tongue		
English	18.4%	33.3%
French	68.5%	53.7%
Italian	4.6%	0.5%
Greek	1.5%	0.3%
other	7.0%	12.2%
Occupied Private Dwellings		
total	1,026,925	3,125
owned	41.7%	6.6%
rented	58.3%	93.4%
Private Households		
total	1,026,920	3,125
1 person	23.7%	46.9%
2 persons	29.1%	32.6%
3 persons	18.0%	11.8%
4+ persons	29.2%	8.8%
Total Families	742,180	1,505
% lone parent	13.8%	15.6%
Mobility		
total pop		
age 5 yrs+	2,613,965	5,490
non-movers	49.7%	20.9%
movers	50.3%	79.1%
Place of Birth		
Canada	83.8%	72.7%

Highest level of schooling		
pop 15 yers+	2,237,550	4,915
with univ.degree	9.1%	37.6%
Occupied Private		
Dwellings	1,026,895	3,125
average value		
of dwelling	\$66,338	\$98,814
median length		
of occupancy		
(years)	4	2
gross rent >25%		
of income	7.8%	7.4%
owner >25% of		
income	7.5%	0.8%
Occupation Males		
total labour		
force	834,720	2,180
managerial	13.3%	39.9%
teaching	3.0%	3.2%
medicine &		
health	2.3%	3.2%
technological	8.9%	24.3%
clerical	10.1%	6.2%
other	60.8%	23.2%
Occupation Females		
total labour		
force	593,985	1,905
managerial	5.9%	14.4%
teaching	6.2%	8.9%
medicine &		
health	8.3%	10.5%
technological	5.6%	15.0%
clerical	38.1%	33.6%
other	33.2%	16.8%
Private Hld Income		
all hlds	1,026,895	3,125
under \$10,000	22.8%	8.0%
10,000-14,999	12.3%	8.0%
15,000-19,999	12.9%	13.3%
20,000-24,999	12.6%	13.3%
25,000-29,999	10.7%	11.0%
30,000-39,999	14.5%	19.5%
40,000+	14.5%	27.2%
average income	\$24,038	\$32,492
median income	\$20,771	\$28,535

CHAPTER 4
PHYSICAL ANALYSIS AND
BEHAVIOURAL OBSERVATIONS



Photo #1 Forest Environment

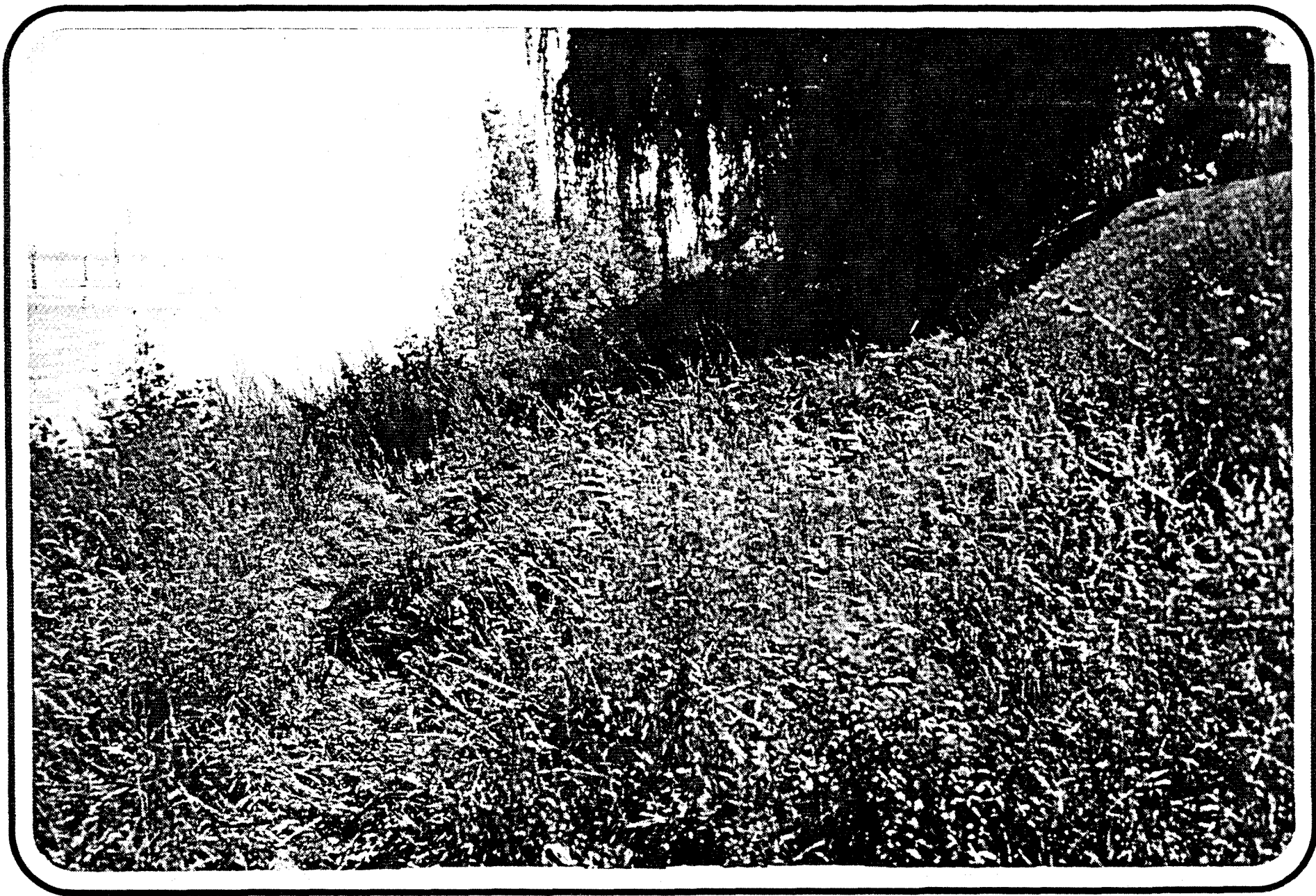


Photo #2 Natural Path

distance, the forest once again. Similarly those leaving the Island are treated to the same visual themes plus outstanding views of Mont Royal and the skyline of Montreal's central business district. The fact that these views are experienced by most Island residents on a daily basis may account for the overwhelming consensus in community image (discussed in the resident survey section) and the vigorous objections to development proposals which would jeopardize these images.

4.1.1 Island Zones

The Island may be conveniently divided into a number of different zones based on the natural features and built environment. These zones are depicted on Figure 8.

Zones 1 and 2 encompass all of the rental units built and managed by Metropolitan Structures Inc. The initial development took place in Zone 1 and it is here that the innovative design features, which for many people characterize the special residential quality of the Island are evident. These features include a mix of townhouses and low-rise apartments grouped around common courtyards that are accessible only on foot via a pedestrian pathway system linking major recreational and community functions. Tenants of several high-rise apartment buildings located on the river's edge or along de Gaspé Blvd are also directly accessible to the pathway system. Vehicular access to residences is provided via cul de sacs which in many cases incorporate parking spaces in a "traffic island". Careful attention was given to architectural harmony throughout most of this development. While the architecture itself has had mixed reviews, most residents consider it to be quite attractive.

While Zone 2 also includes pedestrian pathways, it is substantially different from Zone 1 in most other respects. Here virtually identical three storey apartment buildings are arranged within a "superblock". These apartment units have relatively small rooms in comparison to Zone 1 units and are of substantially lower quality design and construction. These qualities have resulted in lower rents and a higher percentage of young, moderate income families. Occasionally this area is referred to as the "slums of Nuns' Island" although it in no way resembles conditions commonly associated with slums and is in fact a comfortable living environment.

Zones 3, 4, 5 and 6 were developed following the decision in the late 1970's to abandon plans for an exclusive rental community of some 50,000 people. Almost all of these dwelling units are owner occupied.

Zone 3, the first privately owned area to be developed, deviates significantly from the MSI rental project. Frequent complaints include the inappropriate mix of housing types, lack of architectural harmony, poor street pattern, and the complete absence of pathways or public parks. These undesirable features

occurred due to uncontrolled piece-meal development on a project by project basis.

Some of the poor planning may be directly attributed to the Pyramid condominium project which was the first project in this area. This riverfront building is served by a private roadway which bisects Zone 3 making it difficult to provide roads on either side. Further, fences on both sides of the access road extend from Berlioz around the building and six feet out into the water to ensure that pedestrians do not trespass on condominium property.

Many of the problems noted for Zone 3 are also present in Zone 5 which developed without a comprehensive plan. Again no public facilities, parks or pathways are provided in this area. Architectural styles clash. The road pattern is not optimal. Small scale development, on a project by project basis, in the absence of appropriate zoning controls has not worked well on the Island.

The situation is somewhat different for Zones 4 and 6. Zone 4 has come to be known as "high-rise alley" due to the linear development of high-rise condominiums along the water. Most of this development is affiliated with different phases of the Les Verrières sur le Fleuve project. Essentially the development approach is to apply concepts which worked well in the MSI development to a condominium project. Residents of this project share an extensive "backyard" along the riverside. It is, however, an island within an island, as residents who do not live in the condominium are not welcome to trespass on the grounds.

The architecture of these buildings has generally been well received and the care taken in locating the buildings has resulted in an attractive and useful outdoor environment. This project is in direct contrast to another condominium building in the zone, Les Jardins d'Archipel, which has given little consideration to outdoor space aside from the perceived need for security fences and cameras.

Zone 6 was developed with respect to an overall plan. While it too does not include any public facilities, parks or paths, it is less chaotic than Zones 3 and 4 and has fairly harmonious architecture and a rational road system. This development consists of traditional townhouses on small, private lots and several condominium projects.

Light industrial activities predominate in Zone 7. These industries attract most of the employees who make daily work trips to the Island. Curiously, these buildings are located in one of the areas of the Island with the best view of Montreal's CBD - an amenity which is ignored in the architecture and site plan of these buildings.

Commercial and office buildings are located in Zone 8 which is closest to the bridge traffic. Until recently, development in

this zone was very slow. Several major projects, however, are now underway.

The golf course and the woods (Zones 9 & 10 respectively) have been under development pressure for some time. Both were infact earmarked for development in the original MSI plan and the municipal infrastructure was designed to accommodate development in these zones. However, residents have vigorously opposed development in both areas.

Despite the opposition construction has now begun on the golf course where some 2,100 housing units, most of which are in low-rise condominium buildings are planned. This project is proceeding in phases starting with the area furthestmost from Nuns' Island Blvd. Presently the golf course is still very much in evidence. This zone is relatively flat, windswept and featureless. Yet it provides much appreciated green space and offers outstanding views of the Montreal skyline.

A series of lakes, which were bordered on the north by a significant grove of trees until the development of Zone 6, are the most interesting natural features of the golf course zone. While the level of water in the lakes has been controlled artificially by MSI for some time there is a natural depression in this area. These lakes are to be retained in the development plan for Zone 9.

The woods originally occupied approximately one third of the overall area of the Island. This percentage decreased with the MSI development and extensive landfill. Nonetheless, with about 43 hectares the woods remains a very significant feature of the Island. It is sufficiently large to attract extensive bird and small animal populations and sufficiently dense for hikers to feel "off in the wilderness" and occasionally even "lost in the wilderness". The numerous marsh areas and a lake add to the amenities of the zone.

The woods, however, is facing relatively serious ecological problems. Drainage, which has shifted with development of the Island, is a key problem as is, dutch elm disease. To survive the woods will have to be carefully managed.

Finally Zones 11 and 12 are the two primary areas where development is not opposed by residents. Zone 11, however, consists almost entirely of landfill which is of variable quality due to a lack of control over source material. The ground is very uneven and occasionally unpleasant to walk through due to the presence of dumped construction materials. Poplar trees have begun to dot the landscape and offer some protection from the constant wind in this zone.

The original plan for the Island envisaged a first rate golf course in Zone 11. Plans for a similar project resurface from time to time. Alternatively residential development is

considered for the zone. Geotechnical surveys indicate that development is possible in all but a small zone where garbage was deposited. Though costly this option is not far fetched as it would add an enormous area to the tax base with minimum public outcry. Similar difficulties were faced with the original MSI development.

The northern tip of the Island, Zone 12, is separated from the rest of the development by the Champlain Bridge which serves as a visual and noise barrier. Few people ever visit this area of the Island. The view downstream and of Montreal's CBD, however, are striking. In the MSI plan this zone was to be the business center of the Island. It may, however, also be suitable for residential development if protection from the noise generated by traffic on the bridge is provided.

4.1.2 Activity Areas

There are three main activity centers on the Island - Elgar Shopping and Community Center, Place de la Fontaine Recreation center and Le Village Shopping Center.

The Elgar Shopping Center was originally conceived as an integral part of the new town concept as it was intended to provide neighbourhood amenities within easy walking distance of most residences. The decision of MSI to develop Le Village Shopping Center, which in most respects resembles a typical suburban shopping center, however, effectively limited the commercial viability of the Elgar center. Automobiles are now used for most shopping trips as in most suburban areas. Elgar has, nonetheless, retained its' community role as most public meetings and organized social events or recreational activities take place there.

The early MSI development with its extensive pedestrian pathways and the wooded and landfill areas offer exceptional opportunities for walking. It is possible to go literally for miles along what are often delightful paths and trails without crossing a street. This system is especially appreciated in winter by cross country skiers who are able to put on their skis at the door. There are many interesting places to visit along these routes and often excellent views.

Aside from a multi-functional bikepath paralleling Nuns' Island Blvd. the pathway system has not been continued in the newer development. Here even access to the shoreline is cut off. No neighbourhood parks exist in this area and few striking views are available at ground level.

The most successful park areas are Vancouver and Elgar Parks which are well used by both children and adults. The former offers an outstanding riverside location while the latter has a wider range of facilities in a protected, treed environment.

4.1.3 Behavioural Observations

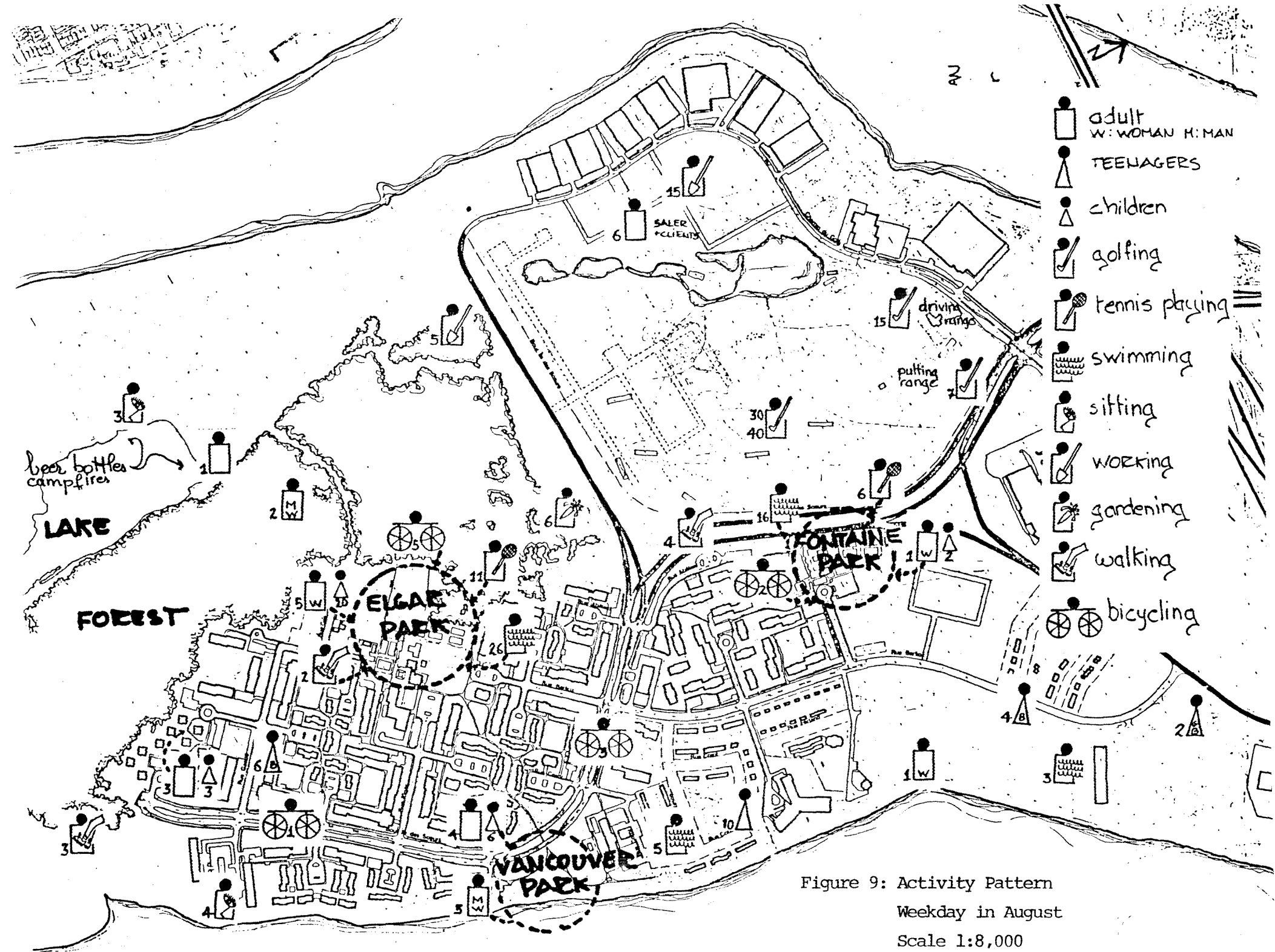
The activity patterns of residents were systematically observed on Tuesday August 12 and Sunday August 17, 1986. As both days were hot and sunny it is likely that the extent of activity on these days is indicative of the highest outdoor activity levels for weekday and weekends during the summer. This information is supplemented with more casual observations during the study period and throughout the author's eight years of residency on the Island. Details concerning the use of space available in the different housing groups are left to the following section.

Table 4.1: Number of People at Different Sites

	Weekday	Weekend
Golf Course		
golfers	30-40	40-50
driving range	15	17
putting green	7	7
Blvd du Golf		
walkers	2	11
bikers	-	14
Garden	6	7
Elgar Community Center		
field	-	4
day care	33	-
pool	26	80-100
tennis court	11	8
tennis watching	-	46
park	10	17
Place de la Fontaine		
pool	16	80-100
tennis court	6	-
park	5	-
Riverside Locations		
Vancouver Park	15	65
201 Corot	6	37
200 de Gaspé	4	64
Les Verrières pool	3	20
Forest	6	10
Lake	4	13

Table 4.1 illustrates the activity levels at selected sites on the Island. The number of individuals recorded in each case represents those people observed during a traverse of the Island between 2:00-4:30 in the afternoon. Here it is clear that the main activity areas are the golf course, community centers, Vancouver Park and the landscaped riverside areas near highrise rental projects. Similar distribution patterns were noted for both Tuesday and Sunday although substantially more people were in evidence on the weekend.

The only consistent difference between the two days was that elderly people and women with children represent a higher percentage of the total number of people observed on the weekday than was the case for the weekend. The difference in the number



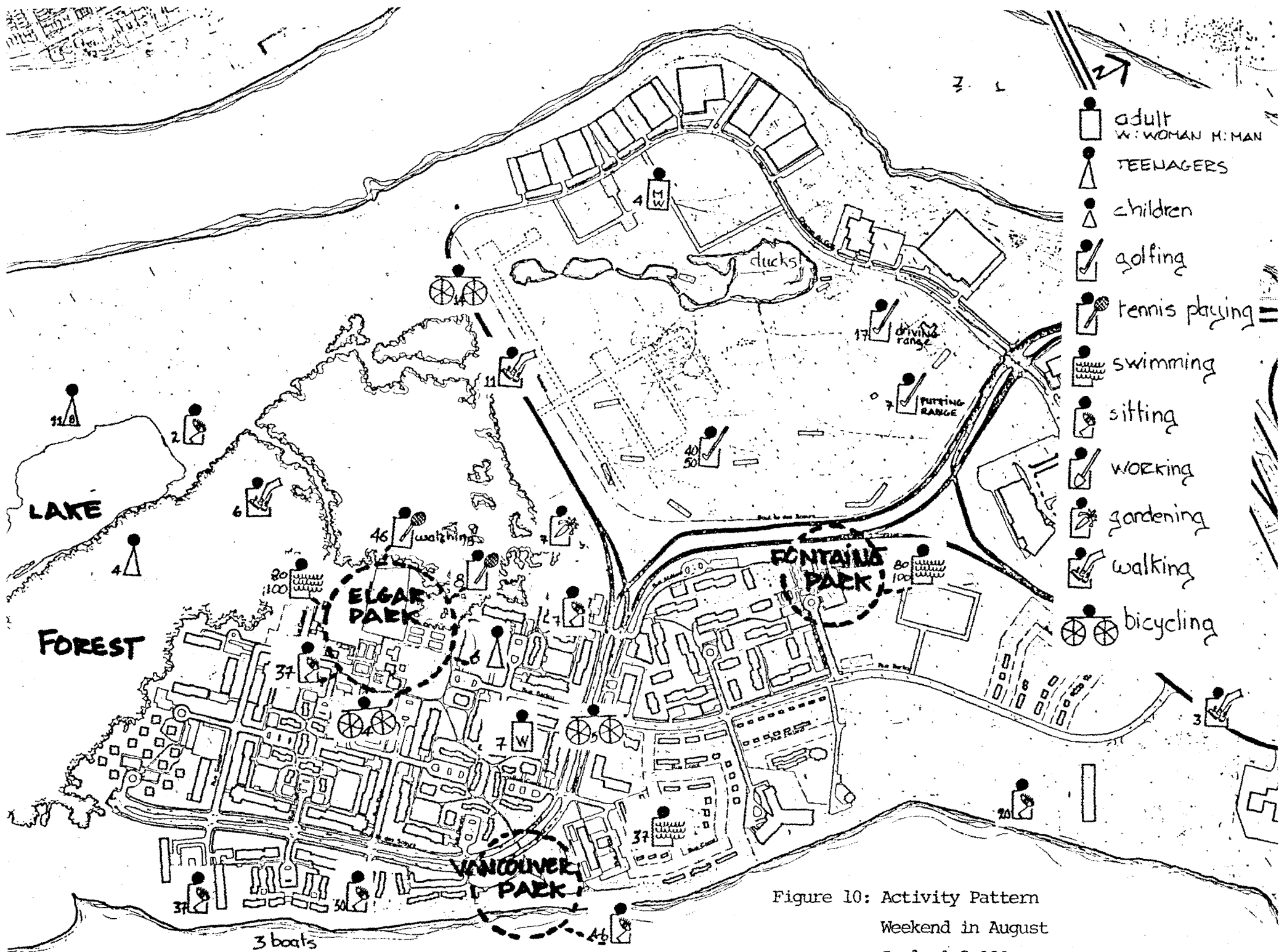


Figure 10: Activity Pattern
Weekend in August
Scale 1:8,000,

of women with children is most dramatic for Zone 2. In this zone women with children were observed scattered throughout the area on Tuesday, while only one woman with a child was observed on the weekend.

Few people were observed using patios or balconies on either afternoon. However, there were plenty of behavioural traces such as towels, barbecues, and chairs on almost all of the townhouse patios which indicated that these patios are extensively used at other times. In fact these areas are most extensively used at meal times and in the early evening. The balconies showed little sign of use - these tend to be used sporadically for short periods of time with peak use also occurring at meal times and during the early evening.

A few activity areas desire special mention. Several areas serve as rather unique social gathering points where the concept of "living in a park" is borne out. People were observed sitting alone or in groups of all sizes scattered about on two riverside locations near highrise rental buildings. Many brought chairs, barbecues, lunch or dinner and refreshments to sit wherever they preferred, but generally in close proximity to others. This possibility of setting up shop alone or with friends anywhere in the landscaped zones is exceptional. It provides an ideal opportunity to entertain friends, play sports, read, sun, sleep, eat or simply people watch in the semi-public or public space immediately adjacent to the home.

Teenagers tended to conglomerate in the small plaza near the community center. They tend to sit along concrete abutments lining the walk way keeping an easy watch over the activity of the center. Younger children are also attracted to this area to skate board or play in the nearby park.

The woods and landfill area are used primarily by walkers who stroll along unmaintained pathways. These pathways were for the most part created by people tromping through the bush. Some clearance has been completed from time to time by cross country ski enthusiasts affiliated with NIRA. Very few people deviate from the paths in the summer due to the density of the undergrowth. Those who do are rewarded with hidden treasures such as rare wildflowers and the occasional secret lean-to. Some people, especially bird watchers, come to the Island expressly to walk in the woods and landfill areas as the Island is home to about 200 species and its marsh areas serves as a significant stopover for migratory birds in the region.

In recent years the seclusion of the lake area has attracted a number of picnickers. Many sunbath nude and swim in the water. As this area is not managed and very rarely policed some garbage, beer bottles and the remnants of camp fires are in evidence. The landscape itself is not especially attractive - it is simply the result of unplanned landfill operations - and lacks the qualities of both natural environments, such as the woods itself, or landscaped areas, such as Vancouver Park.

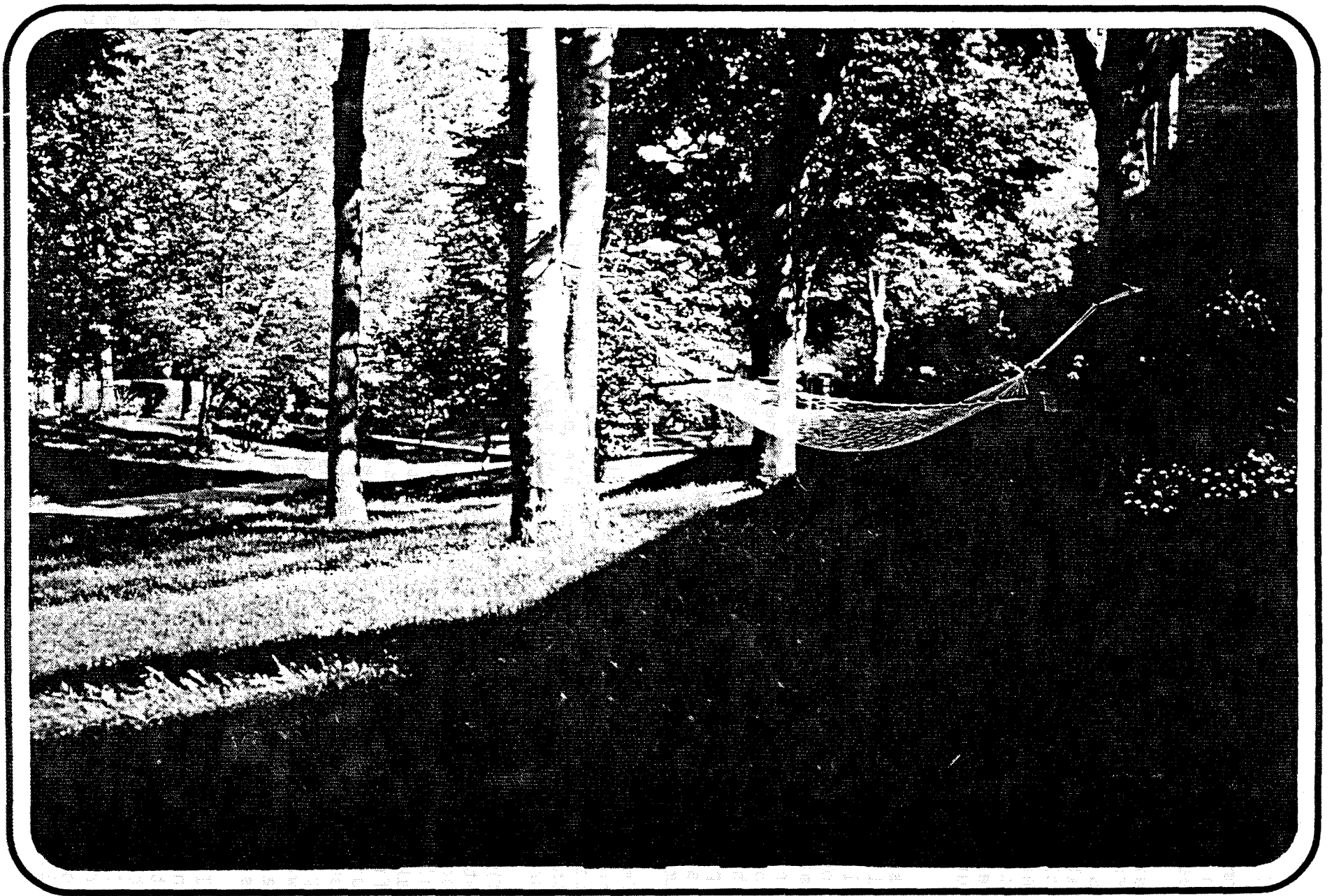


Photo #3 Extension of Private
Area

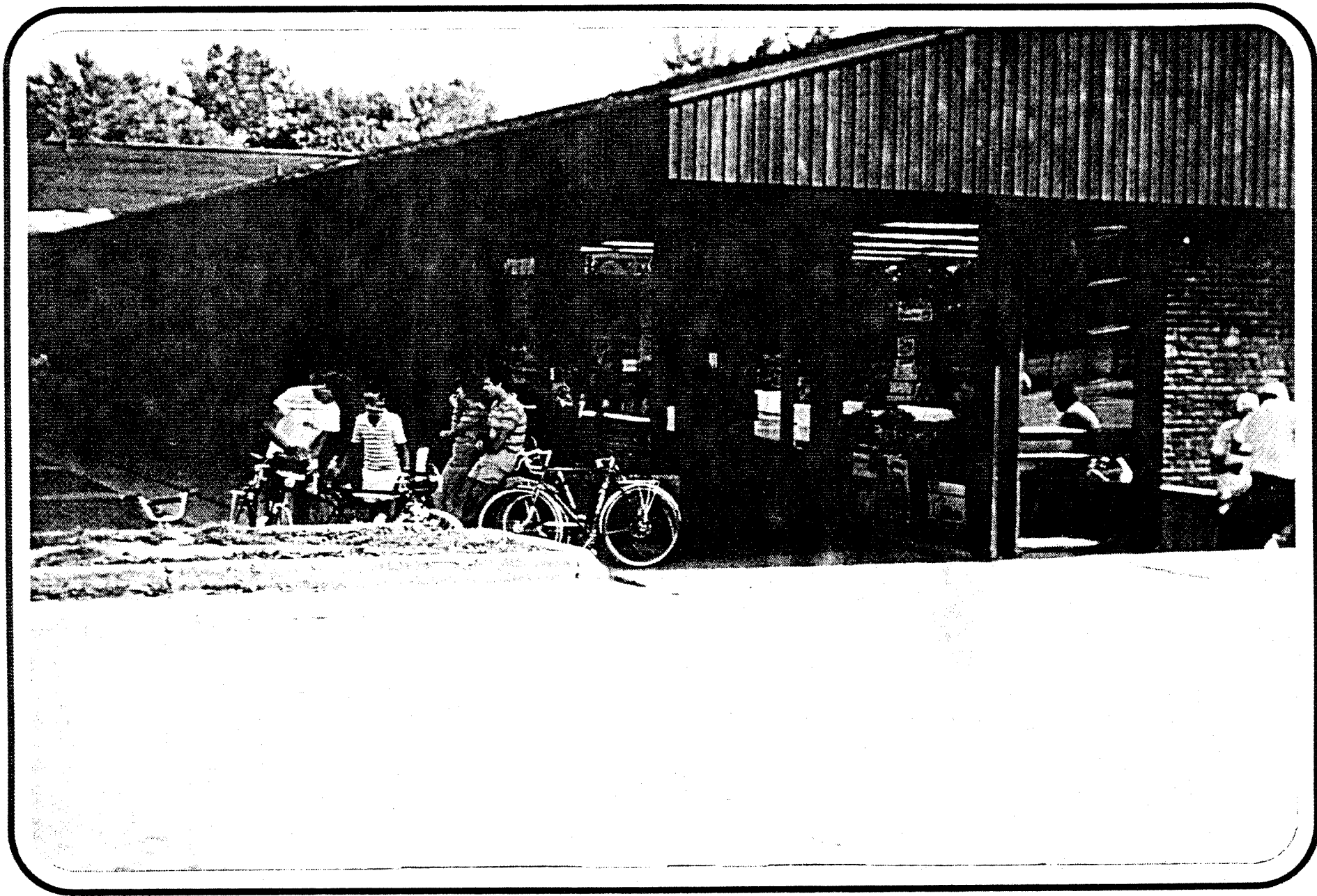


Photo #4 Teenagers at
Community Center

Groups of people were observed at the Northwest end of the lake on both of the survey days. The most activity was evident on Sunday when 11 people, several dogs, numerous floats and a motorcycle constituted a vibrant group splashing about in the water and cycling nearby on the landfill. Other, more serene groups, were located along the lake. Some of these groups are very successful at appropriating space and effectively create private territories. While the "ownership" of these territories is most apparent when the group is present the remnants which they leave (ie. beer bottles, camp fires, arrangement of "seats") suggest to casual visitors that they are trespassing even when the area is not occupied by a group.

In sum, the Island presents a very rich environment for a variety of recreational activities ranging from extensive park areas for sitting and sunning with friends along the river bank; to swimming pools, tennis, playgrounds, golf, a woods for hiking, cross country skiing and exploring; and wilder areas where the rules are not clearly defined. The presence of these amenities within a five minute drive or a short bus ride from downtown Montreal is exceptional.

4.2 Housing Groups

The nature and quality of the physical environment was assessed for seven housing environments which vary with respect to building type, site plan and ownership. These are (1) rented townhouses, (2) low-rise apartments in MSI Phase II, (3) low-rise apartments in MSI Phase III, (4) high-rise apartments, (5) private townhouses with shared yard, (6) private townhouses with private yards, and (7) high-rise condominiums. For each type reference is made to the physical setting, behaviour observations and any behavioural processes which are evident.

4.2.1 Rented Townhouses: Corot

The rented townhouse setting selected for study is one of the key sites along the pathway system as it is located just east of the point where the route between the community center and Vancouver Park passes under Nuns' Island Blvd. These units are among the most exposed to the benefits and inconveniences of the pathway system. They are an integral part of the original concept for the Island developed by MSI and for many observers represent the essence of that concept.

All units are located on three sides of short cul-de-sac roads which have substantial traffic islands that are used for parking. Each unit, nonetheless, has a garage. All front doors face the street and most units have private balconies at the entry level overlooking the street. The layout of the units, however, is oriented toward the back of the house, as the main activity areas - the living room and dining room - are located in the back of the house which has a sliding door leading to a small private patio. The patios are directly exposed to the public pathway system. There are no fences or solid hedges to provide visual



Photo #5 Pedestrian Pathway

privacy or clearly demarcate territory. Rather reliance is placed on subtle landscape elements such as a slight change in ground elevation and indicative planting to distinguish between private and public spaces.

Located within the original forested area of the Island the development benefits from the presence of many mature trees which provide shade, an attractive surrounding, and a certain degree of visual privacy. As almost all of these trees are deciduous they do not restrict solar access in the winter. On the other hand visual privacy is more limited in winter than would be the case with conifers. The vegetation is not constant and some houses have much more privacy than others.

In general the landscape between units is attractive and well maintained. It is apparent that the townhouses are intended for people with means. The sense of openness and direct access to nature in the back of the unit is in direct contrast to the street entrance which gives the impression of a relatively dense urban setting.

4.2.1.1 Behavioural Traces

There are a number of signs of usage and personalization both in the front and back of these homes. Flower pots, chairs, and bikes are often in evidence in the front of the house on the driveway or balcony. These items are also frequently present near the back patios along with towels, barbeques and lawn furniture. The patios show every evidence of extensive use.

Most modifications to the outdoor space occur in the back. Hedges have been altered - sometimes enlarged and sometimes removed. Flowers and occasionally vegetables have been planted by some residents.

Excessive wear is evident in most locations where it is possible to walk from the street to the interior pathway system. These linkage paths are narrow and poorly defined and thus subject to abuse. Some residents have attached ropes between trees to restrict access in zones they consider part of their territory.

4.2.1.2 Behavioural Observations

Townhouse residents use both the front and back of their homes as entrances and places to sit. Formal visitors and guests arriving by car generally use the front entrance while children and neighbours frequently call at the patio door in the back. The choice of a place to sit depends on the microclimate and sociability of residents at that particular time.

Residents sitting on the front porch take an active interest in the activity of the cul-de-sac and frequently engage pedestrians in conversation although they are sufficient distant from the sidewalk to retain their privacy if they wish. The solid



Photo #6 Use of Landscape To
Delimit Public and
Private Zones

railings of the porch, front lawn and private driveway provide clear territorial markings.

The situation is much more complex in the back of the house. Here many residents are exposed to the curious eyes of passersby who stroll along the pathway system. The patio and a 4-5 meter strip from the back of the house appear to "belong" exclusively to the townhouse resident. Yet the pathway itself is clearly available to the public - in part due to the fact that these paths link parks and community services thereby extending the right of use throughout the link. The space between these two zones has semi-private qualities. A slight change in elevation and indicative planting signal the transition in territory.

The degree of privacy is controlled by sitting orientation and averting eyes. Good peripheral vision is a help here to ensure that acquaintances are acknowledged while strangers are ignored. Similarly pedestrians on the pathway try to see without staring or intruding on residents. It is a delicate balance which can be easily upset by loud voices or occasional noise that draw attention to the presence of others.

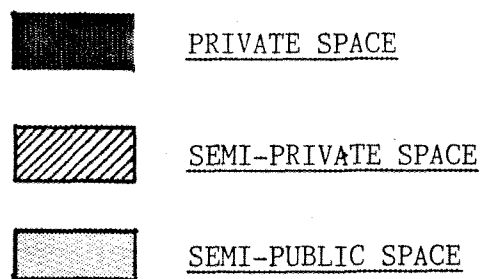
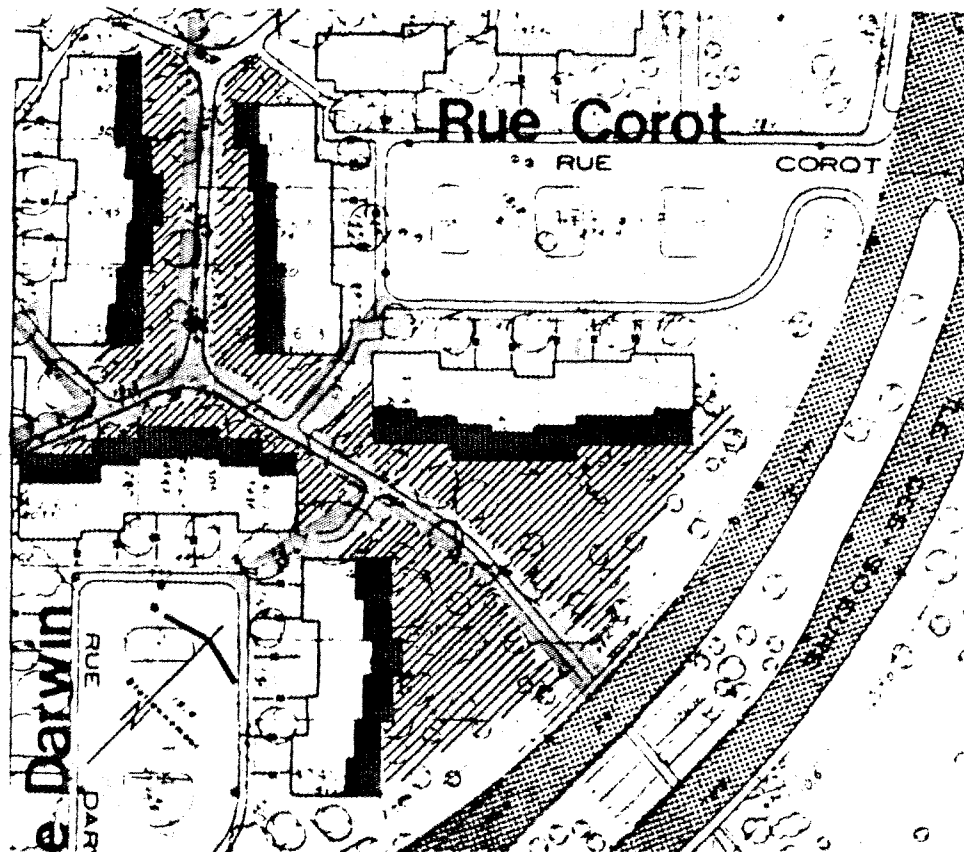


Figure 11a: Spatial Analysis
Townhouse Rental

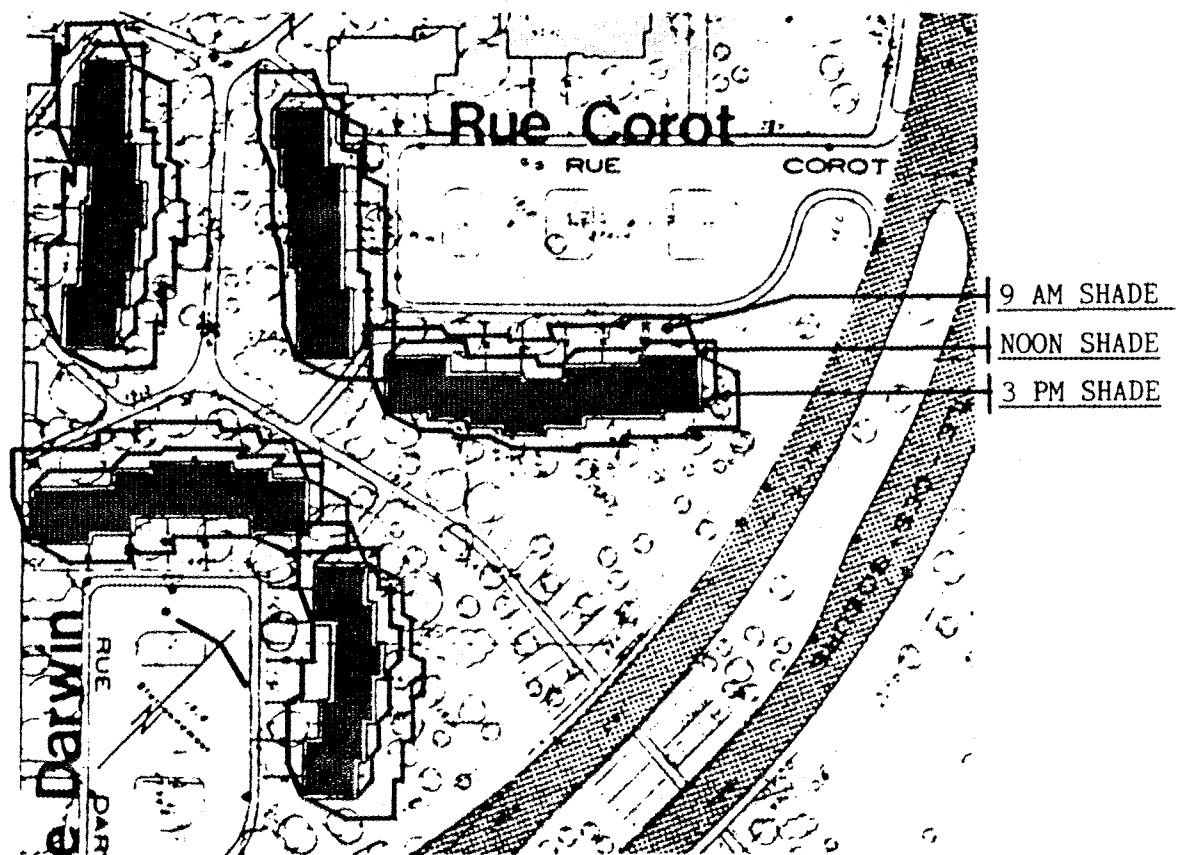


Figure 11b: Sun Shade Analysis
for July 29
Townhouse Rental



Figure 11c: Elevation
Townhouse Rental



Figure 11d: Illustration
Townhouse Rental

4.4.2 Low Rise Apartment: Corot

Phase I and II of the MSI development include a mixture of low rise apartments and townhouses. The apartment buildings are most often 4 to 6 storey brick and concrete buildings which are reasonably architecturally harmonious with the townhouses. Each building has two principal entrances; from the cul-de-sac or street and from a courtyard which is shared with townhouses and is linked to the pedestrian walkway system.

The landscape is predominated by mature deciduous trees which were left in place at the time of construction. These trees shade virtually all of the courtyard during summer yet allow excellent sun penetration in winter.

Each apartment has a recessed balcony which runs the full length of the unit. Railings are solid except on the ground level where some balconies have been converted to patios.

4.2.2.1 Behavioural traces

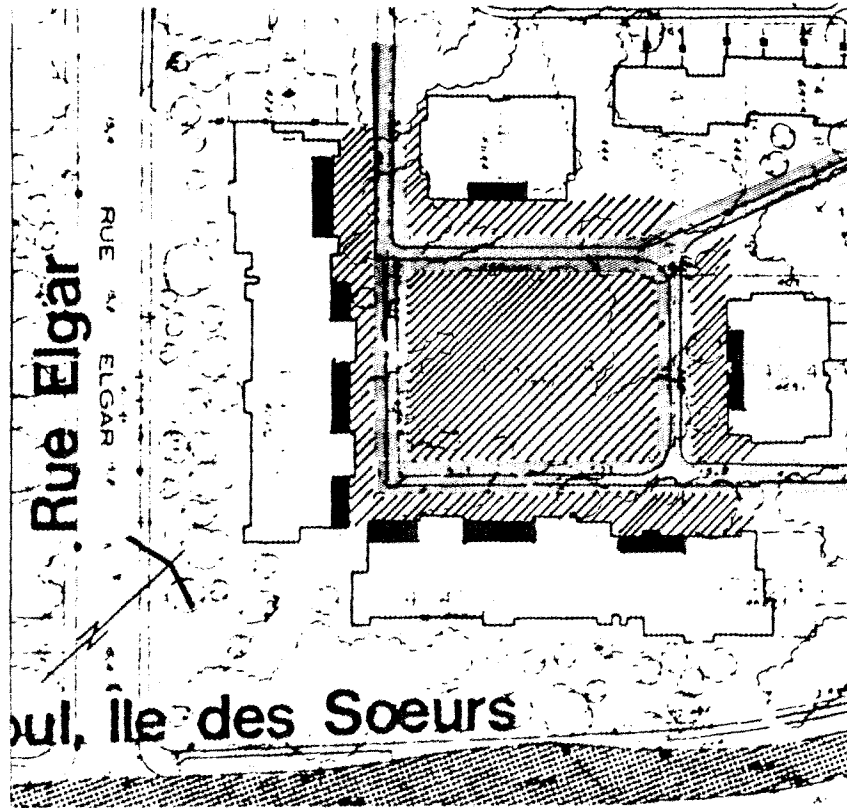
The majority of balconies are used for sitting and for storage. Aesthetic problems with outdoor storage are minimized as the railings are solid.

There is little evidence, however, that the courtyards are used aside from paths worn in the grass by pedestrians taking shortcuts and the presence of dog feces. Sandboxes and benches located in the courtyard show little signs of use and are poorly maintained.

4.2.2.2 Behavioural Observations

There is a clear definition of territory around the apartment buildings. The balconies are the only private space. The courtyard serves as a semi-public area where tenants can meet or children play under supervision of their parents. The public pathways which surround the central courtyard area provide a clear limit to the space which is designed specifically for the residents of the apartment building. In several locations, however, tenants with balconies close to ground level allow children to access the unit directly from the courtyard effectively extending their private domain to the walkway due to the proliferation of bicycles and other personal articles. Other residents have planted flowers which personalize the space immediately in front of their unit.

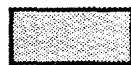
The courtyards, are rarely used due, in part, to the extensive vegetation. These trees shade the entire yard leaving little or no opportunity to sit in the sun. It is not possible to sunbath on the balconies either but the feeling of being in a "tree-house" provides some compensation.



PRIVATE SPACE



SEMI-PRIVATE SPACE



SEMI-PUBLIC SPACE

Figure 12a: Spatial Analysis
Low-Rise Rental 1

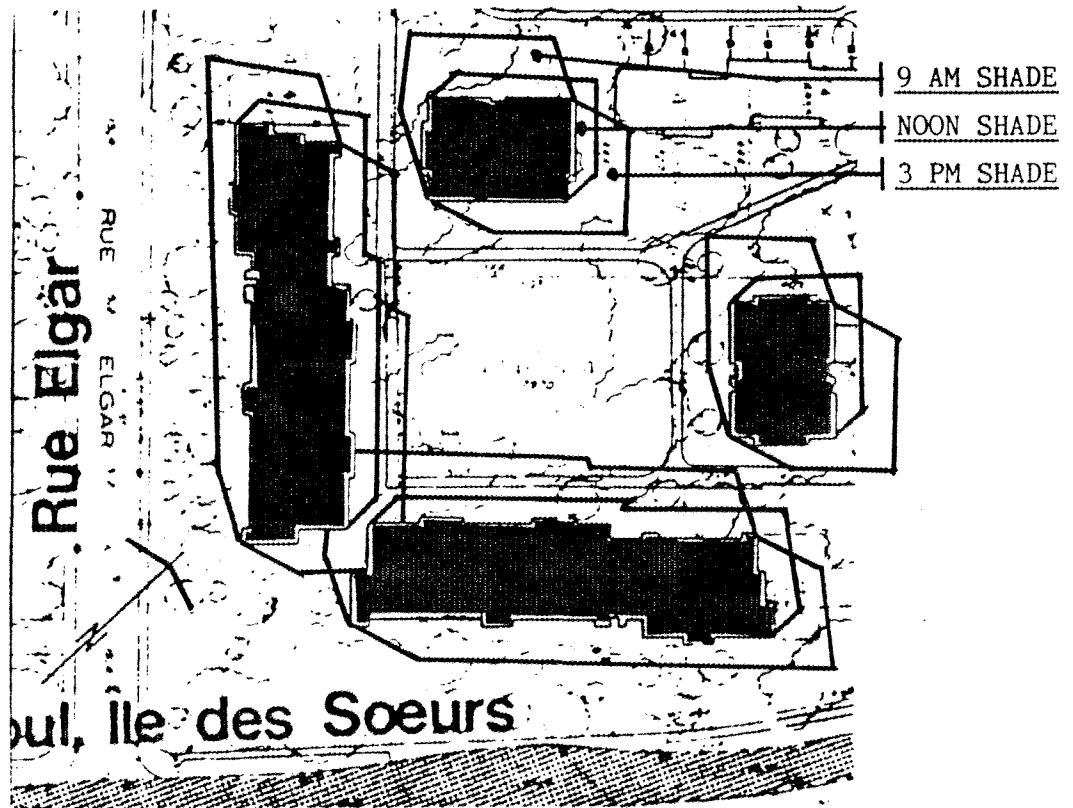


Figure 12b: Sun Shade Analysis
for July 29
Low-Rise Rental 1

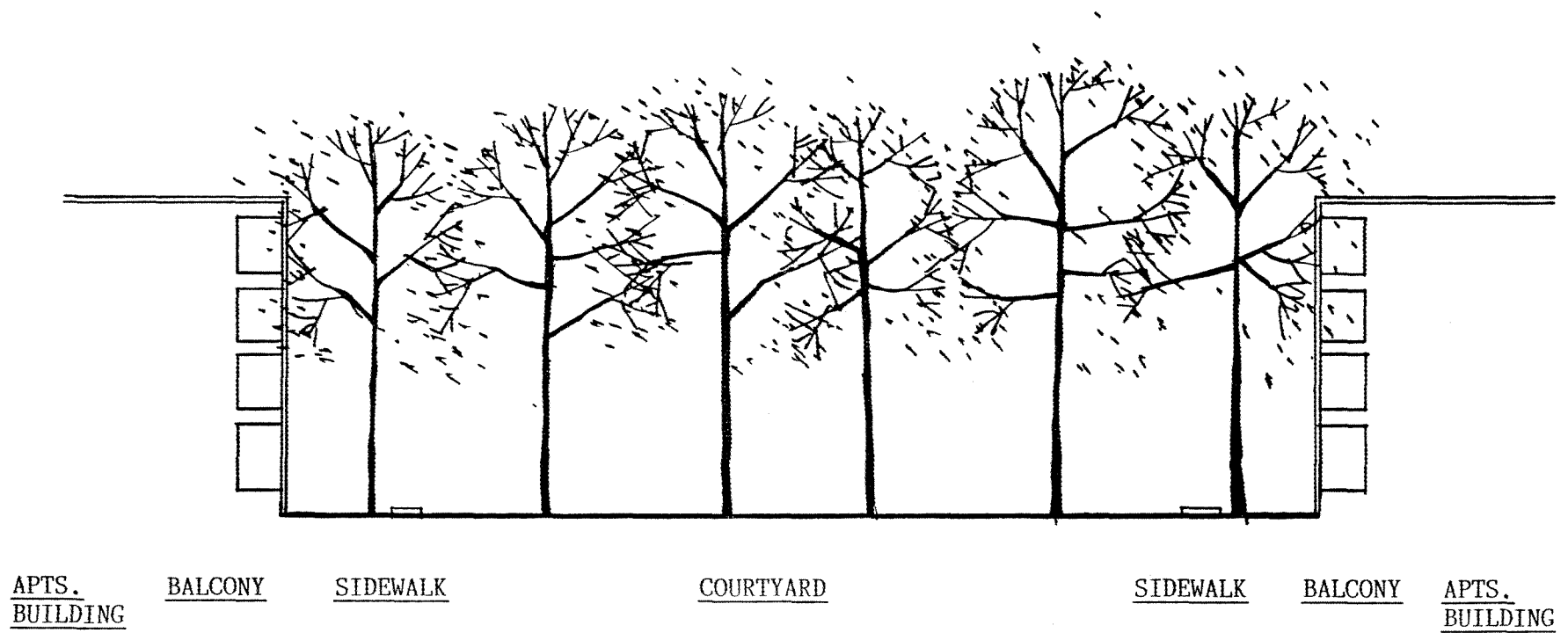


Figure 12c: Elevation
Low-Rise Rental 1



Figure 12d: Illustration

Low-Rise Rental 1

4.2.3 Low Rise Apartment: Place de la Fontaine

The Place de la Fontaine site is part of an extensive relatively uniform development known as Phase III. These units are three storey walk up buildings with relatively small rooms and little sound proofing. They offer the lowest cost accomodation on the Island. Nonetheless, they give the impression of being located in a park. Cars must be left in large parking lots near the street leaving a large superblock accessible only on foot. The buildings studied in detail are grouped around a courtyard which provides access to four of the eight buildings around the perimeter.

Each of the units has a patio or balcony. The patios are small but are well defined with a hedge that provides some degree of privacy. Occasionally there is too much privacy. A six foot hedge can provide plenty of privacy but shade the entire patio and restricts the view from the living room. The balconies are also small with insufficient space for a table and two chairs. Their iron railings offer little privacy.

This area was used as farmland by the Nuns and consequently contains few mature trees. Most of the vegetation was planted following the development and is only now starting to be an important element in the visual landscape.

4.2.3.1 Behavioural traces

The balconies and patios provide radically different outdoor environments. The former are rarely used while the latter show plenty of indications of extensive daily use by the presence of tables and chairs, plantings, bicycles and other personal articles.

Some problems with the separation of the entrances from the parking area are evident as residents occassionally drive their cars along the walkway when they have to load or unload material. This results in the destruction of hedges and gouges in the lawn which turn to mud flats when the ground is wet in the spring.

There is also serious damage to trees due to the use of the courtyard as an active play area by young children.

4.2.3.2 Behavioural Observations

The absence of mature vegetation in the courtyard contributes to the impression that this area is a large semi-private territory. Non-residents feel welcome to walk on the pathway or stroll across the courtyard but the easy surveillance of all residents overlooking the area effectively restricts its use to children and adults from the adjacent units.

Residents with patios find ways to extend their domain along the whole facade of their unit. These modifications include

plantings (which are discouraged by MSI), arrangement of lawn furniture and leaving personal affects about. These areas are used for sunbathing, eating and entertaining. Residents of these ground floor apartments, however, trade off easy outdoor access with visual exposure. All windows are sufficiently low that it is possible to see into units while walking by and the occasional "Peeping Tom" has led to a concern with security. Most residents, nonetheless, feel very fortunate to have ground level access and exhibit this satisfaction by the care which they take to maintain their immediate outdoor space.

The semi-private courtyard area is used by children playing ball, sunbathers and occasionally groups of residents. Observations over an eight year period indicate that the extent to which the space is used as a community gathering point is highly dependent on the inclination of individual residents. The physical plan merely provides an opportunity for social activity.

Residents on the second and third floors of these apartment units have a different relationship with the outdoor space. Those on the second floor are close enough to the walkway to strike up a conversation with passersby while those on the third floor are sufficiently distant, and the necks of those on the ground sufficiently strained, to inhibit conversation. For this reason second storey residents may feel very exposed to passersby and both groups often feel the need to avert their eyes to avoid saying "Hello" to people they have seen frequently yet barely know. The neighbourly edict is complex in this situation, especially for those with balconies near the parking lots.

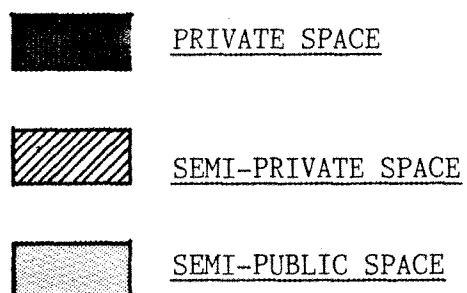
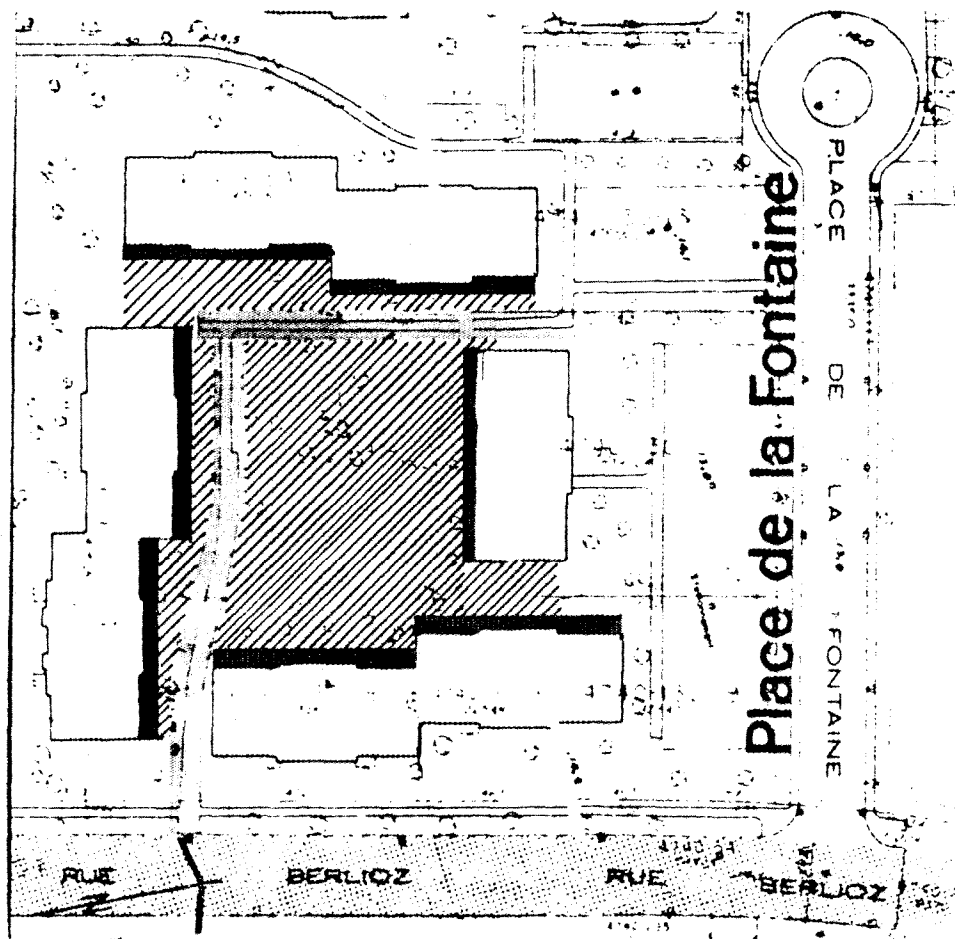


Figure 13a: Spatial Analysis
Low-Rise Rental 2

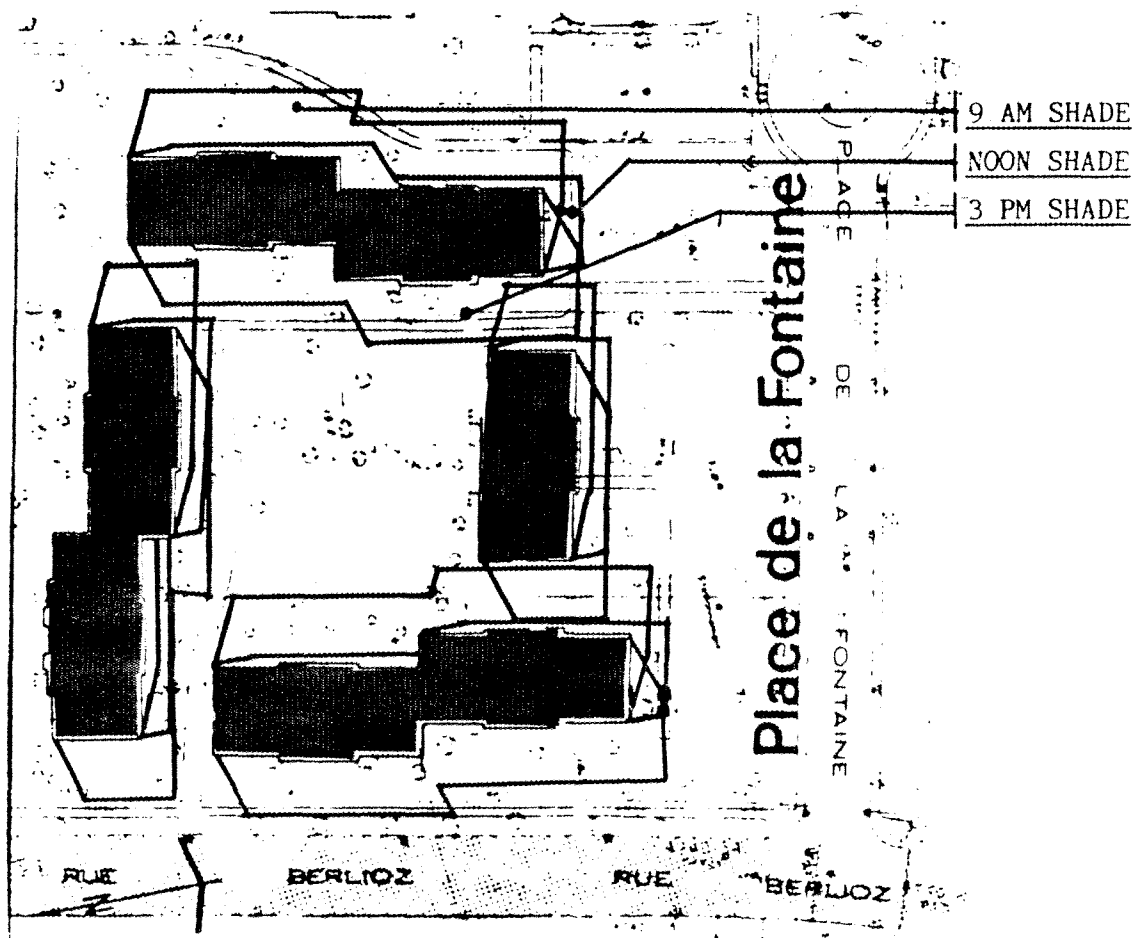


Figure 13b: Sun Shade Analysis
for July 29
Low-Rise Rental 2

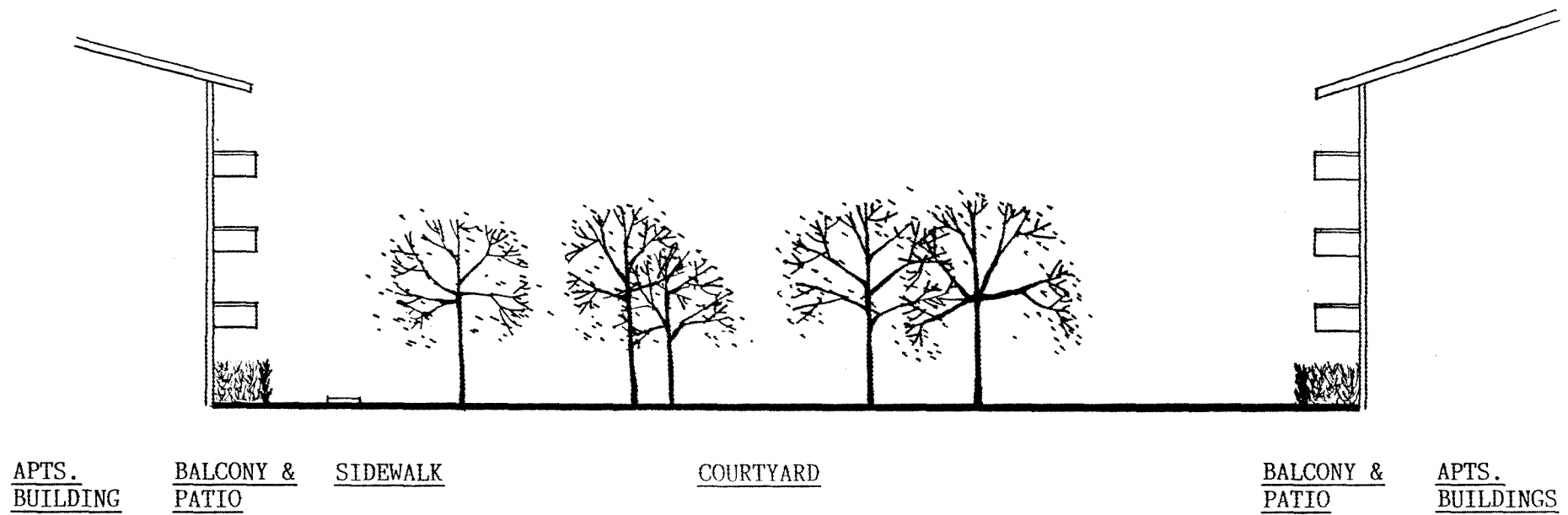


Figure 13c: Elevation
Low-Rise Rental 2

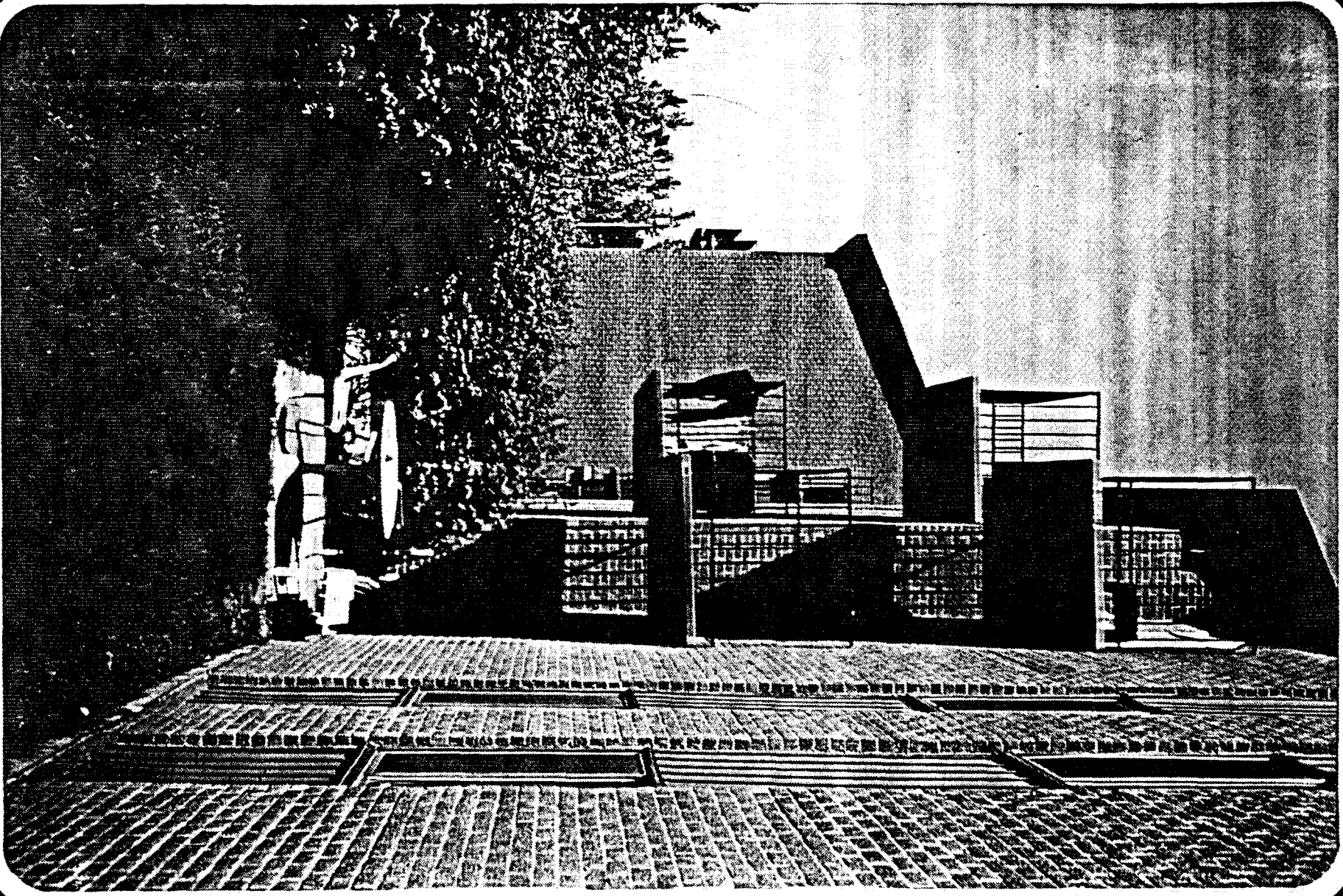


Figure 13d: Illustration

4.2.4 High Rise Apartment: De Gaspé

This site contains two high-rise apartment blocks which are separated by a multi-level parking lot and a below grade indoor swimming pool which is used by all MSI tenants. The buildings are perpendicular to the river and offer outstanding views of the river, woods and city.

One of the striking features of the architecture is that the buildings are raised on pillars with only part of the ground floors glassed in. This allows more extensive views through the building to the river and provides a protected outdoor environment which could serve as a sitting area.

Both native and oramental vegetation is present, most of which is quite mature. The landscape is nonetheless very open, persumably to make the most of the river view from ground level. The view of the river on arrival at the site is however obstructed by the parking lot which rises one level above grade.

The site is often windy due to its exposure to the river. A small depressed area immediately in front of the pool, which allows bathers a window on the world, provides some protection from the wind.

The only private outdoor space available to residents is their balconies. Most of the site has a public quality due to the openness and the fact that MSI has its rental office in the ground floor of one of the buildings. All MSI tenants are familiar with the location.

4.2.4.1 Behavioural Traces

There are very few behavioural traces on the site. The landscape is well maintained and shows little sign of excessive use other than a rough path worn by Island residents walking along the river below the dyke.

4.2.4.2 Behavioural Observations

The site is used primarily as a visual amenity with the exception of hot days when it is transformed into a sunbathing paradise. When the weather is good residents bring towels, chairs, coolers and sit about alone or in groups on the riverside. While this activity is condomed by most residents the landscape is not optimal. It would be preferrable if some locations were secluded from the public parking area with vegetation. The public nature of the site is such that Island residents from other buildings feel welcome to sit out in this area.

The depressed area in front of the swimming pool is a more private space. Sitters recline on the slopes leading down to the pool level and invariably face each other. Few people use the space.

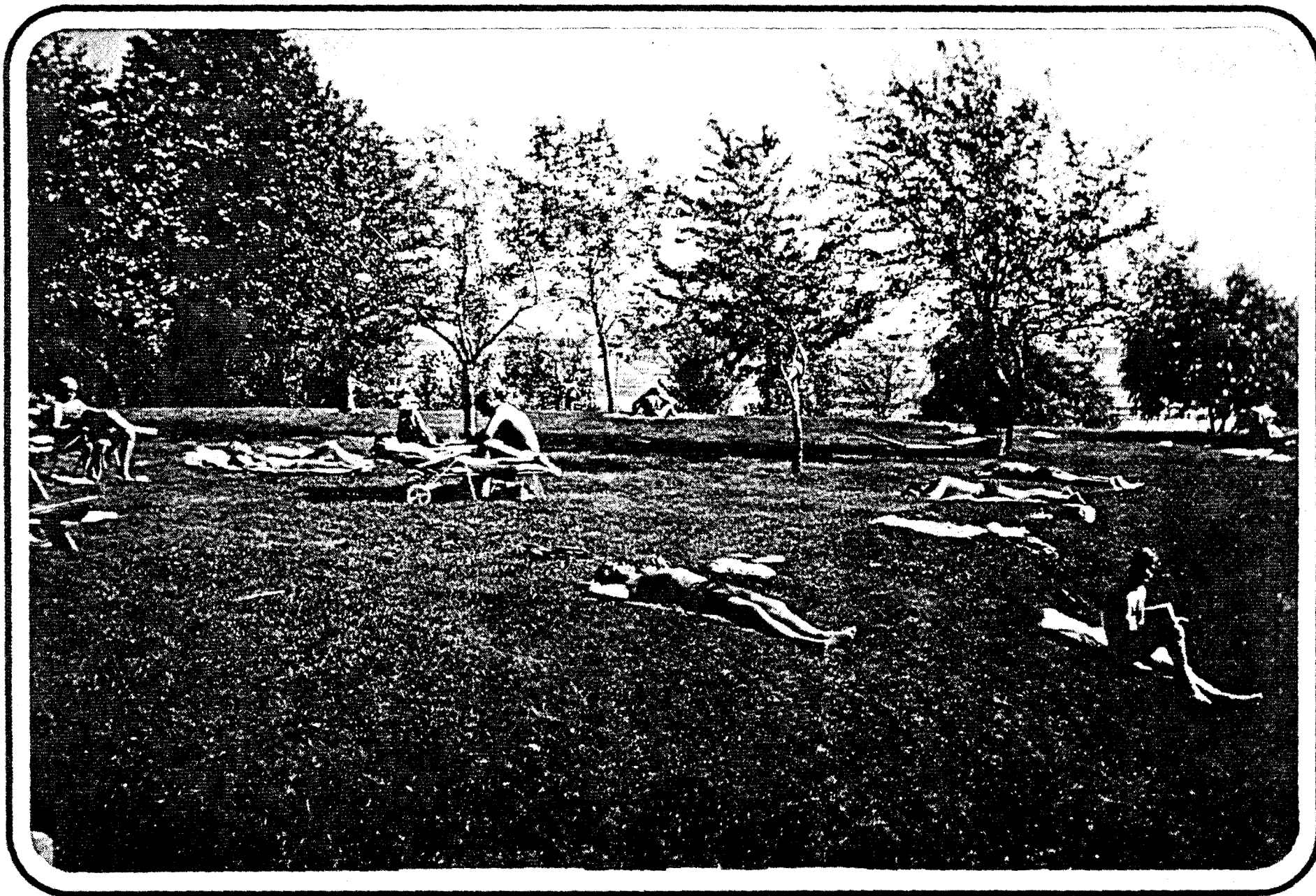
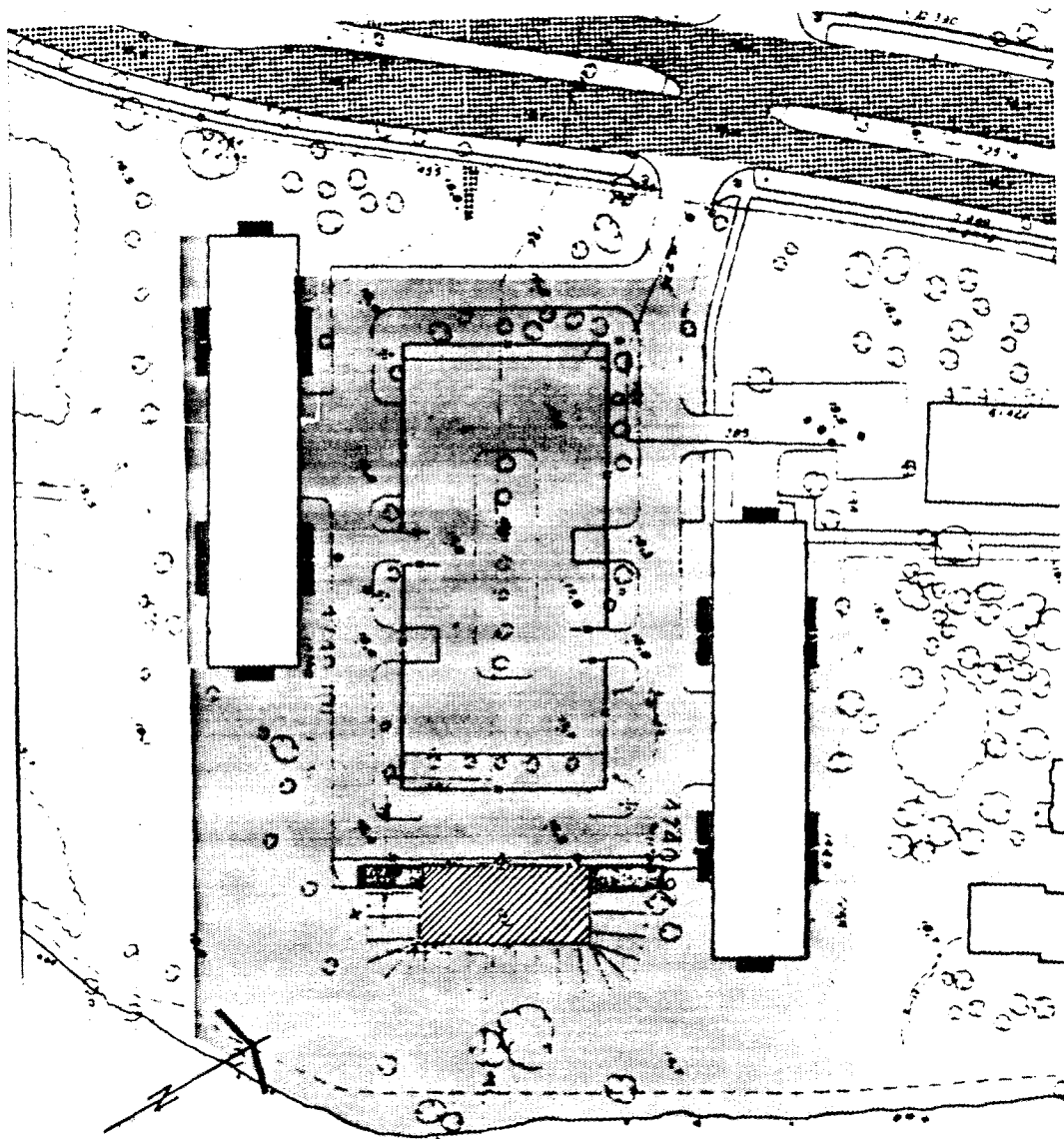


Photo #7 Semi-Public Area Near
High-Rise Apartments

The area under the raised apartment blocks are very rarely used even in the rain when it might be agreeable to sit outside under cover. The space is windy, somewhat dirty (due to swallow nests) and rather uncomfortable. There is a design opportunity here. It could be a very pleasant semi-public environment.



PRIVATE SPACE



SEMI-PRIVATE SPACE



SEMI-PUBLIC SPACE

Figure 14a: Spatial Analysis
High-Rise Rental

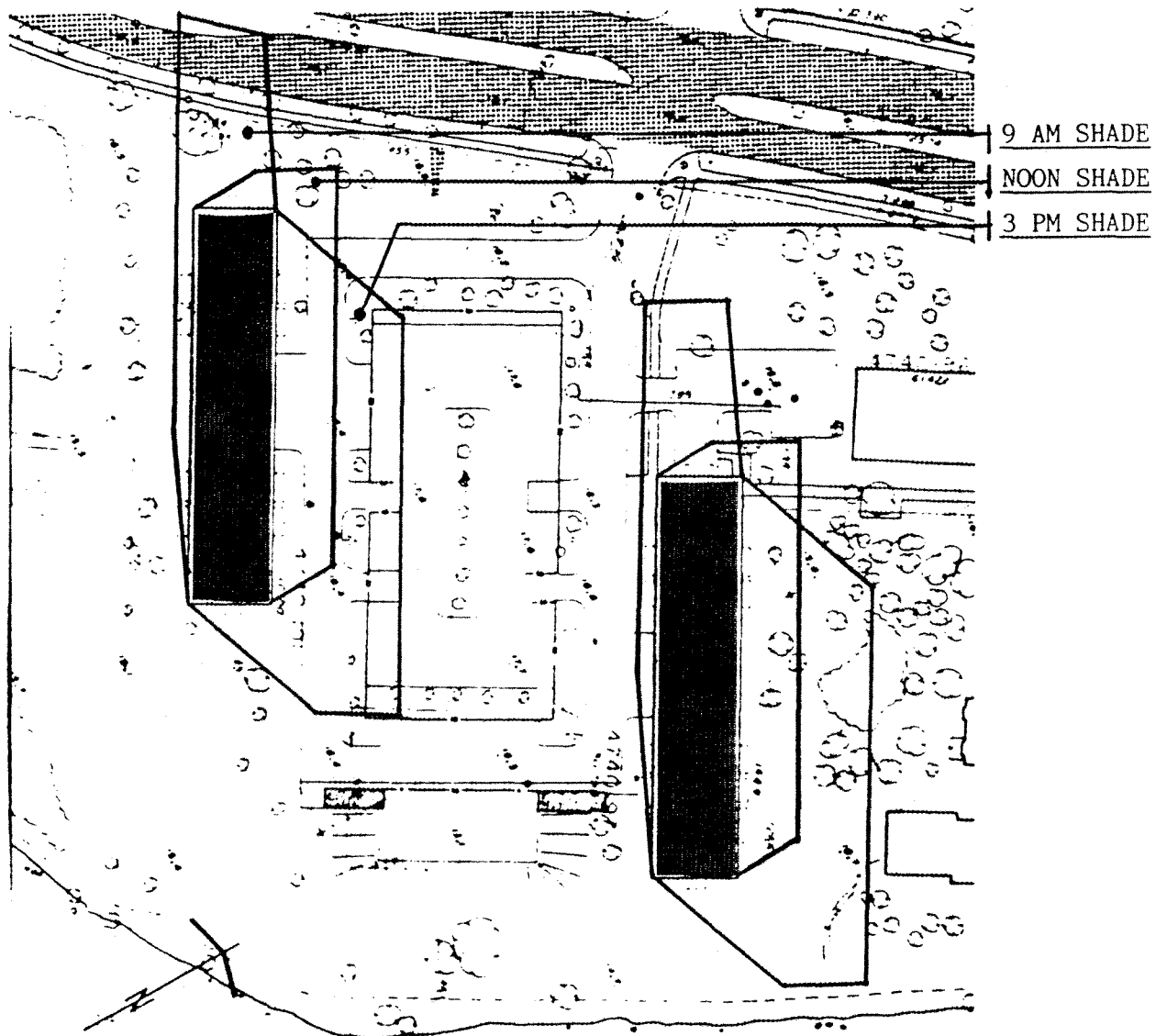


Figure 14b: Sun Shade Analysis
for July 29
High-Rise Rental

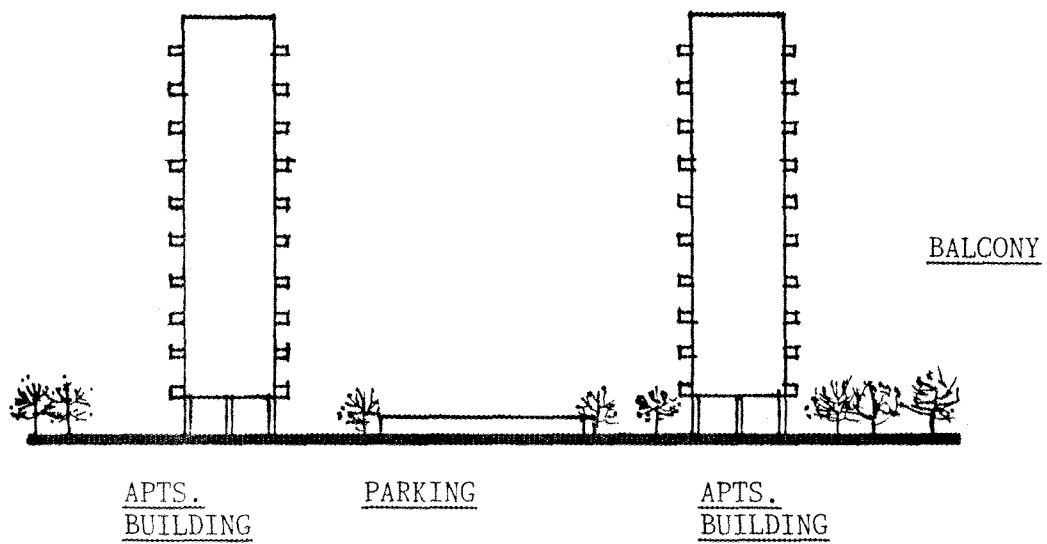


Figure 14c: Elevation
High-Rise Rental

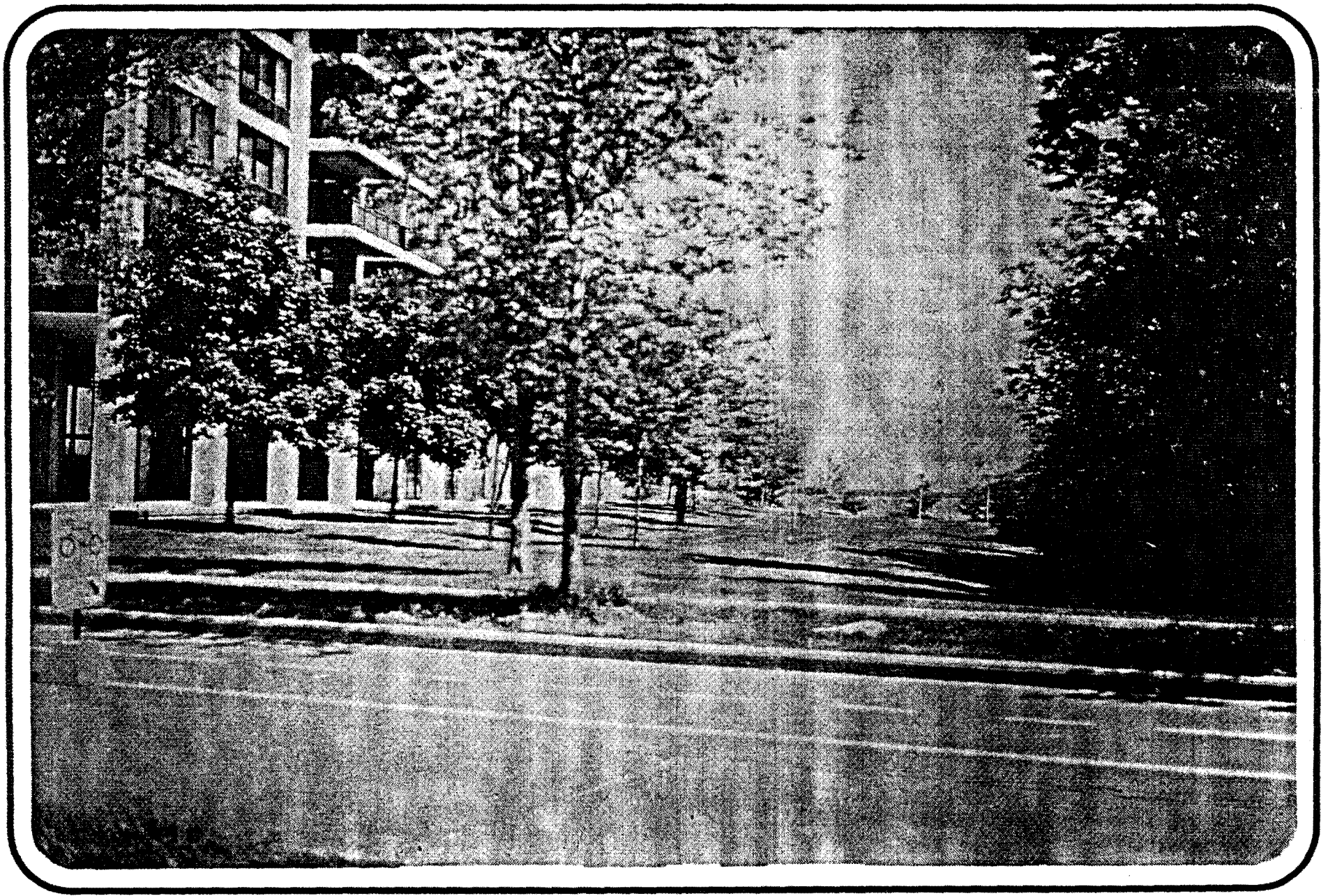


Figure 14d: Illustration
High-Rise Rental

4.2.5 Owner Occupied Townhouses: Corot - Wilson

There are two philosophies of outdoor space management which are evident in the Corot - Wilson townhouse area. The first is the traditional approach in which each townhouse area maintains a small, narrow backyard as private space with clear territorial definition in the form of hedges and fences. Secondly there are some zones where a group of owners, by common agreement, maintain a private patio next to their unit and share the remainder of the lot.

For many the latter arrangement is inspired by the attraction of MSI Phases I & II and the desire to contribute to the special design quality of the Island. There are, however, important differences between the tenant and owner occupied solutions.

Townhouse owners who elect to share their yards have to rely on the good will of current and future owners. Lacking formal agreements any resident could effectively eliminate the possibility of communal space for all. In addition, as there are no public pathways leading into the space, access is limited to residents around the block. This space is therefore semi-private.

The townhouse units are quite attractive and fit in well with the style of the earlier development on the Island. Most units have front balconies which are used in a similar way to the rental townhouse units discussed above.

4.2.5.1 Behavioural Traces

Most owners in both settings have planted trees. These are still very young but are an attractive addition. Several have also completely or partially enclosed their back balconies to enlarge their living area and perhaps create a solarium.

A lot of attention is given to the ambiance and privacy of the patios in the back. Many have been enlarged to better accommodate social gatherings of 6 to 8 people. Screens have been erected to increase visual privacy.

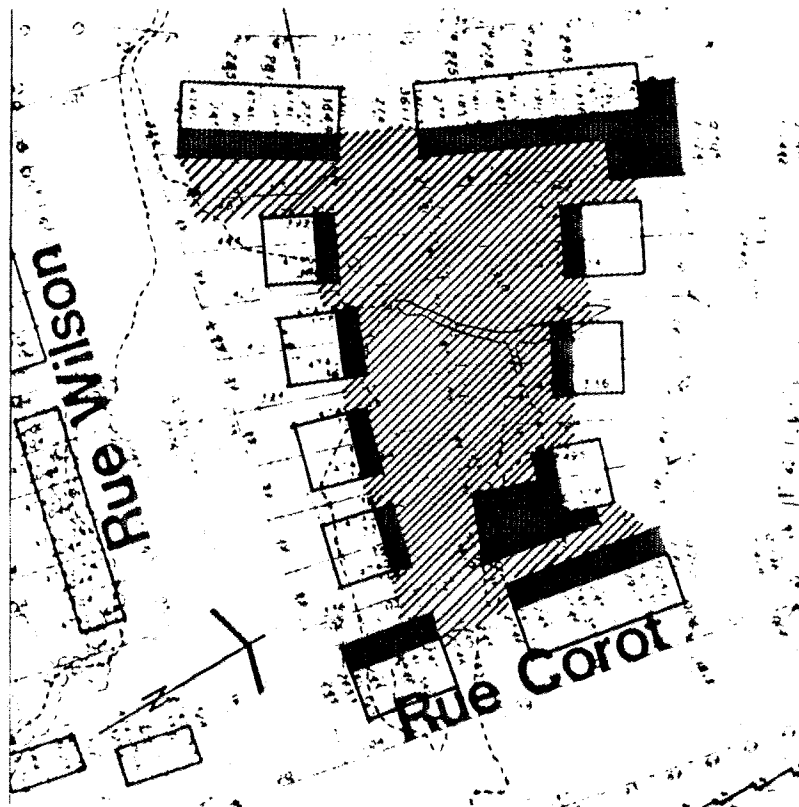
Residents with private lots tend to have more extensive gardens than those with a common semi-private area and a few, with larger than normal lots, have pools. Behavioural traces in the blocks with common areas are mixed. Some have swing sets and other equipment which are communally used while others have not installed amenities and apparently value the space for aesthetics rather than the possibility of shared activities.

4.2.5.2 Behavioural Observations

Residents in both settings tend to use their balconies and patios more intensively than the rest of the yard. The small private backyards have limited possibilities, although some use the space to garden, as a playing space for children or an outdoor

environment for a dog. Many yards simply have an oramental function.

The activites in the shared backyards vary widely depending on the number and age of the children in the block. Children are the prime active users of the space. Currently the private patios are quite exposed to activities in the common area. This exposure will decrease when the recently planted vegetation takes hold.



PRIVATE SPACE



SEMI-PRIVATE SPACE

Figure 15a: Spatial Analysis
Private Townhouse 1

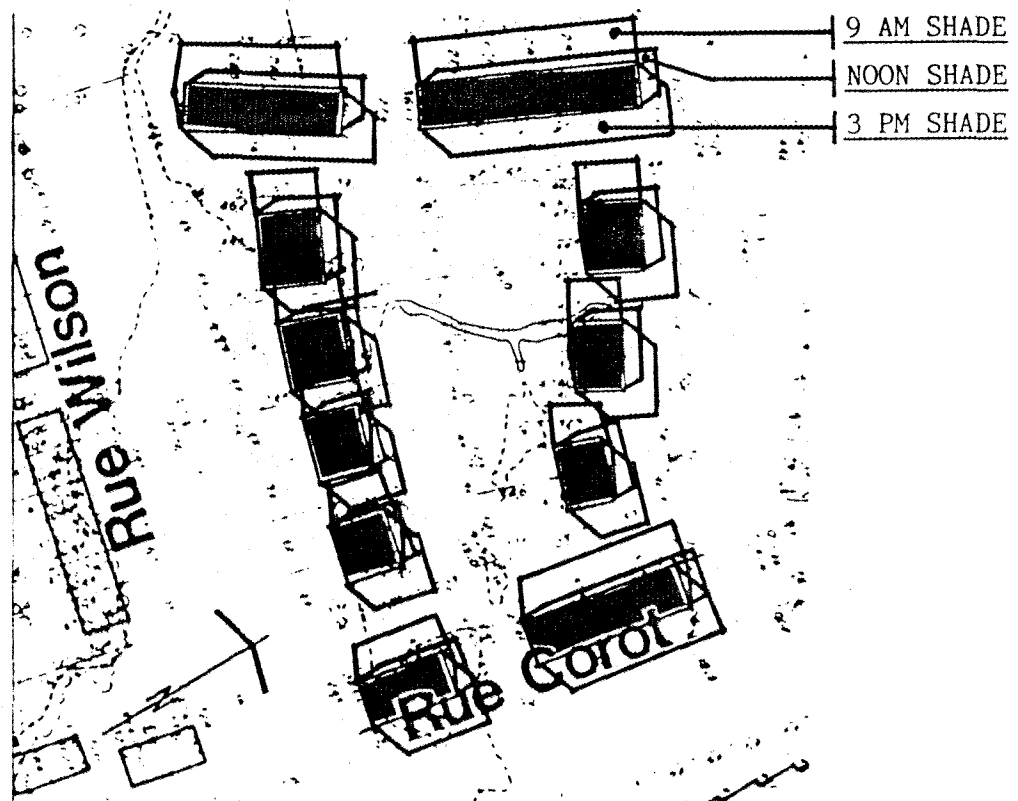


Figure 15b: Sun Shade Analysis
for July 29
Private Townhouse 1

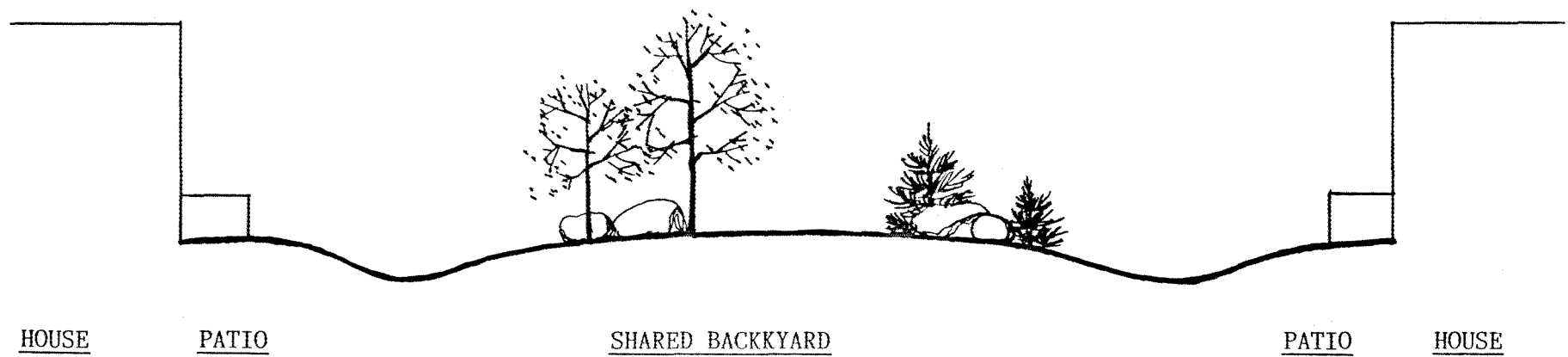


Figure 15c: Elevation
Private Townhouse 1

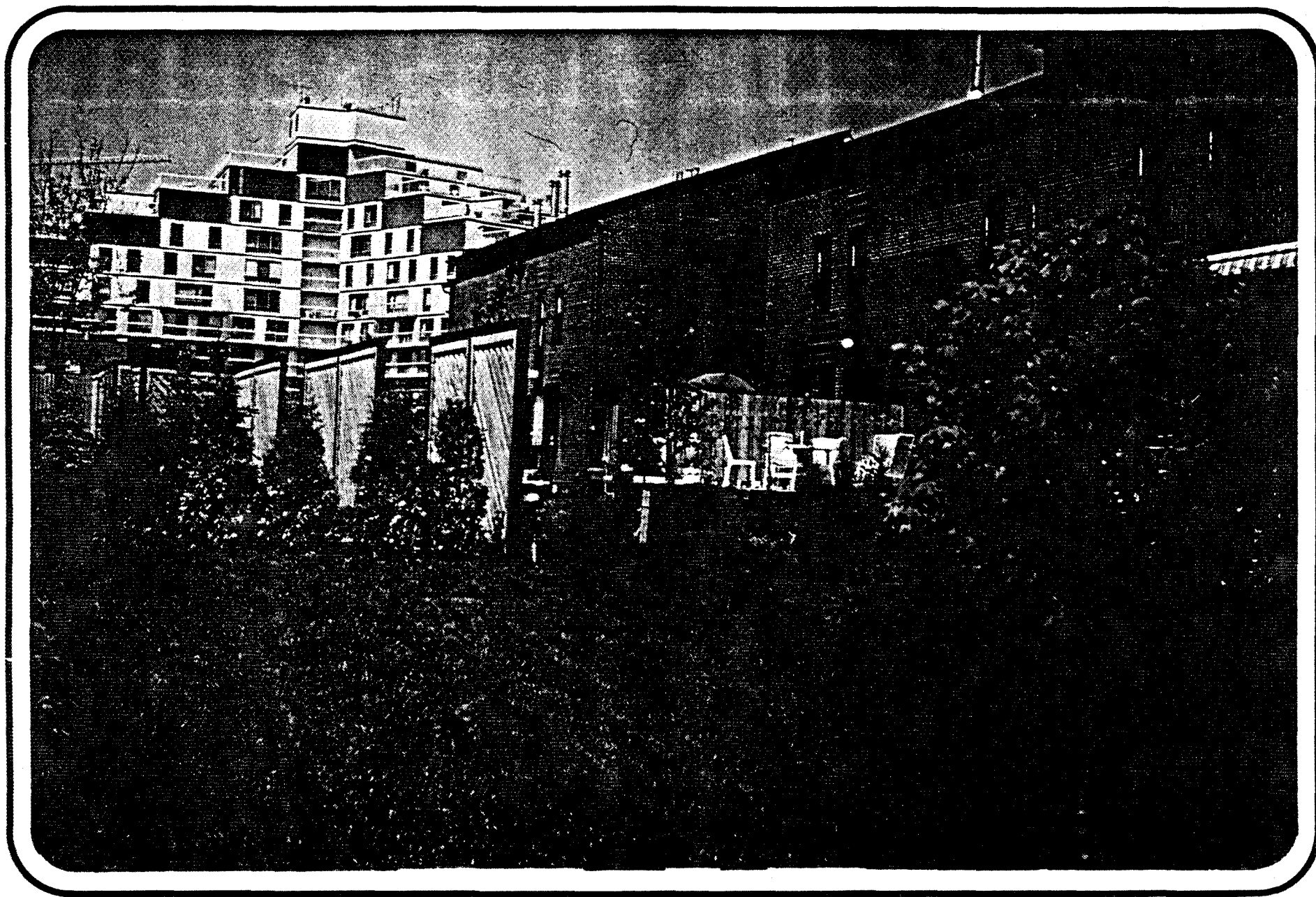
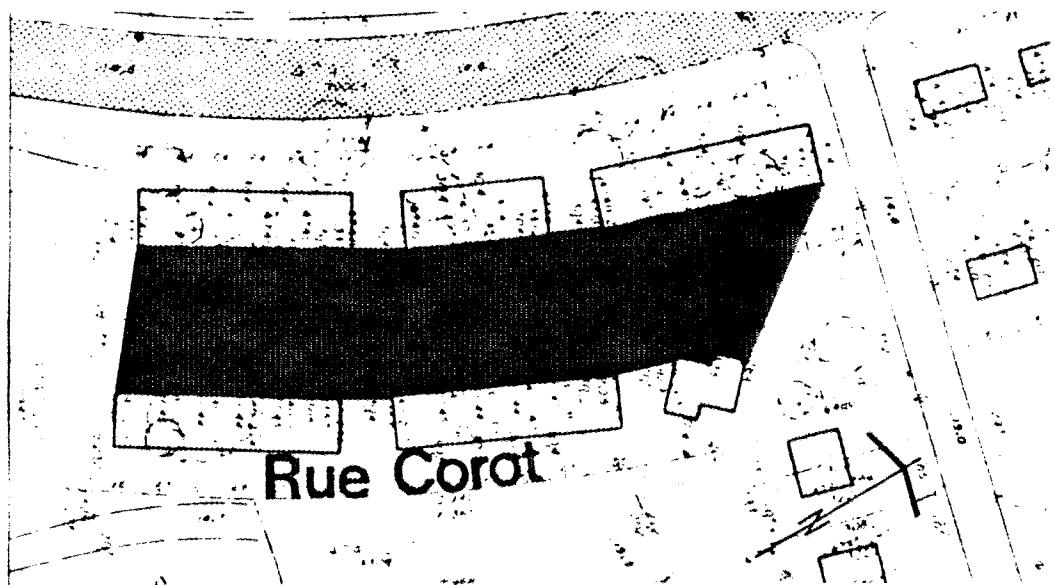


Figure 15d: Illustration
Private Townhouse 1



PRIVATE SPACE

Figure 16a: Spatial Analysis
Private Townhouse 2

SUN-SHADE ANALYSIS FOR MAY 21 AND JULY 29

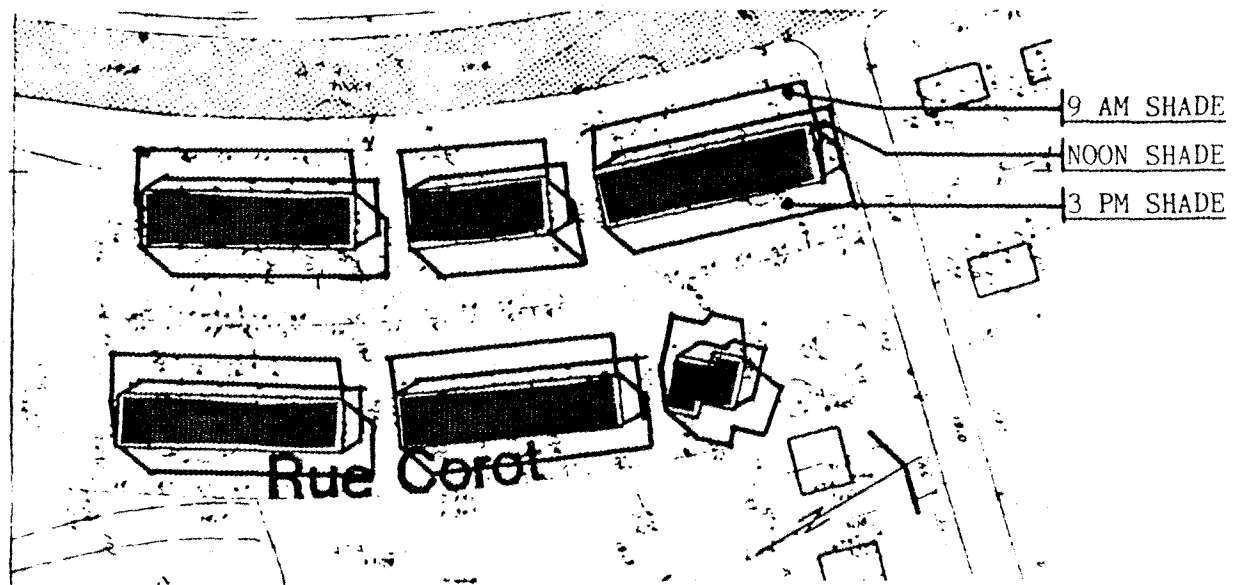


Figure 16b: Sun Shade Analysis
for July 29
Private Townhouse 2

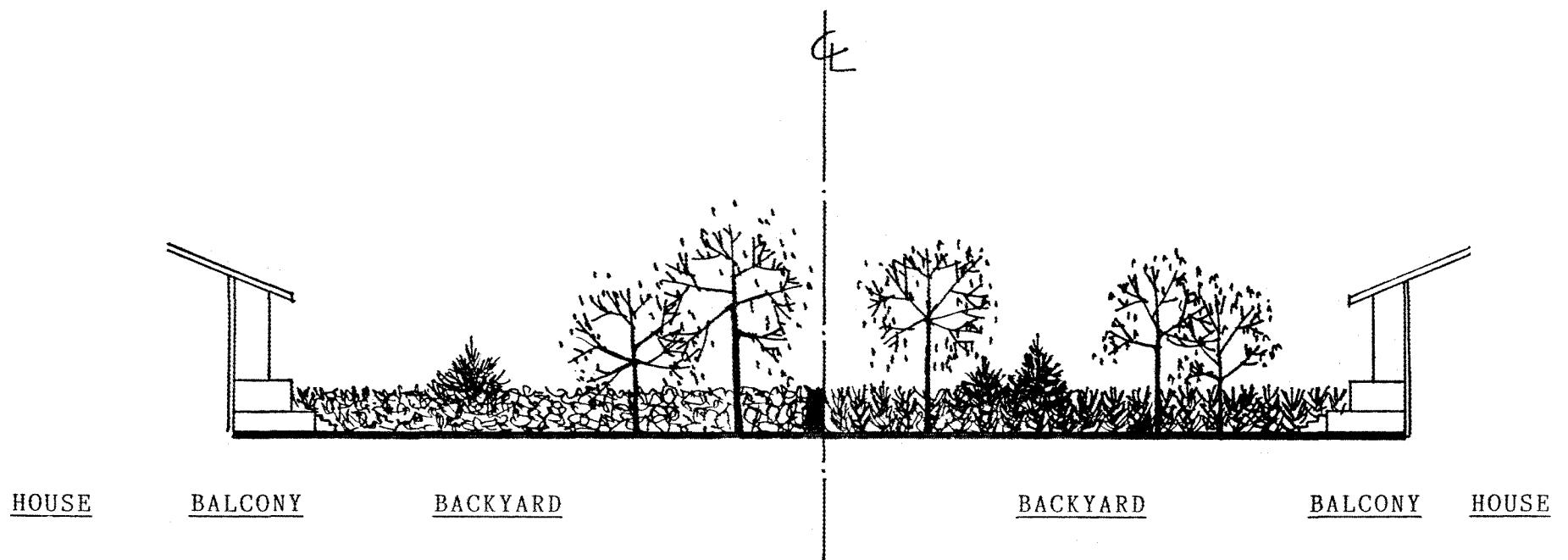


Figure 16c: Elevation

Private Townhouse 2

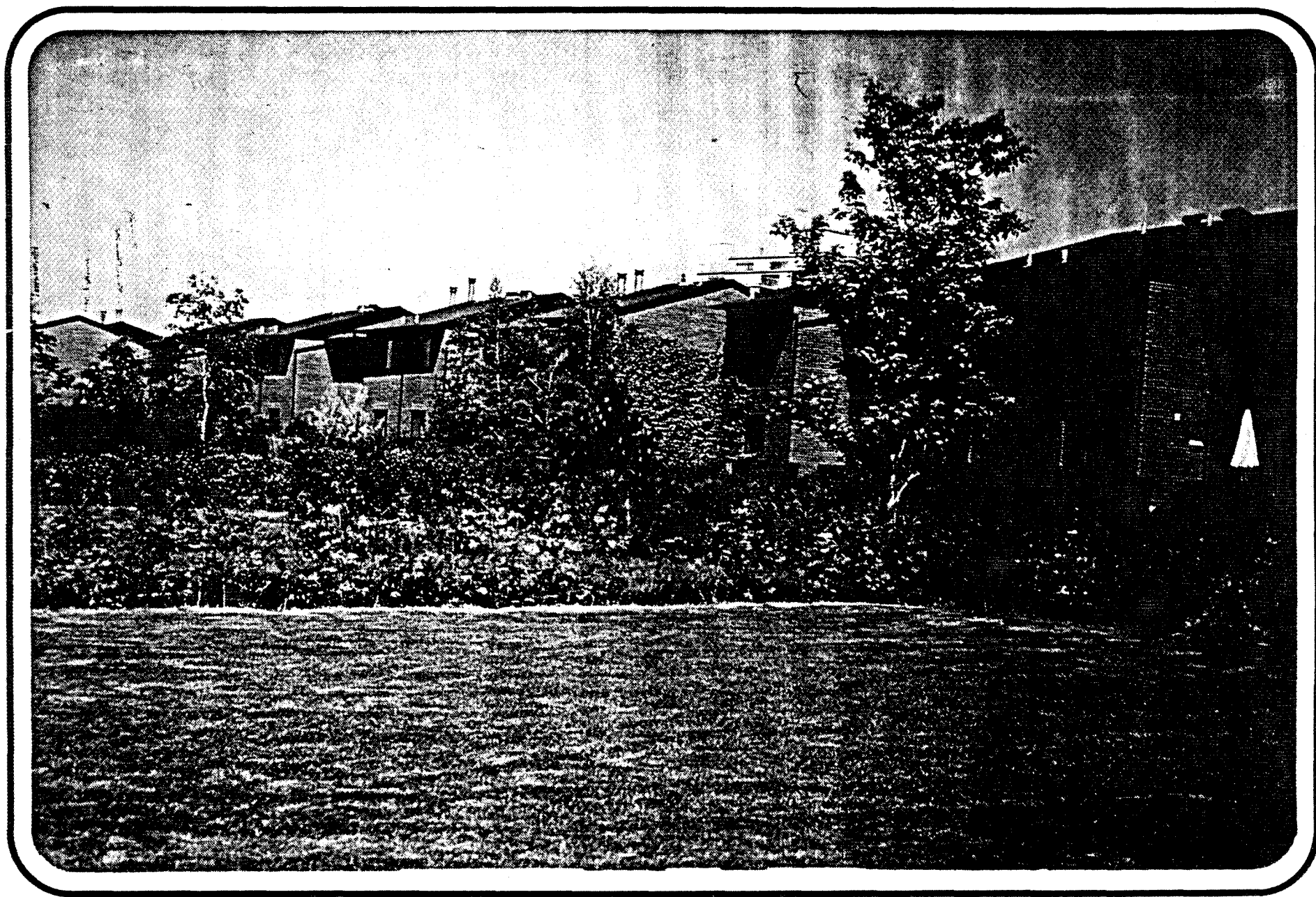


Figure 16d: Illustration

Private Townhouse 2

4.2.6 Condominium: Les Verrières sur la Fleuve

This condominium project is one of the most successful on the Island. It's success is likely due to the care which went into the site plan and architecture of what has become a series of condominium buildings along the riverfront. All units have excellent views of the river, city or both. This is a major factor in the sale of the units.

The site plan gives the project a special quality. The buildings occupy only a small proportion of the overall site. A large landscaped area between the towers and the river provides an open view of the St Lawrence River, the Champlain Bridge and the South Shore. This space contains some recently planted vegetation, a swimming pool, and a gazebo. The vegetation along the river edge is purposefully kept to a minimum to allow an open view of the water at ground level. A few townhouses are also located in a corner of the site. These are very carefully planned to fit into the landscape.

None of these attractions are visible from the street due to an increase in elevation and shurbery. The first glimpse one gets of the common area is in the lobby of the condominiums. Unlike the high-rise rental site, considered above, all of the land area included with this project is clearly intended to be private. Only residents of the project would feel welcome to use the space.

There is some problem with the wind due to the openness of the site. It is occasionally uncomfortable.

Most units have private balconies, some of which are enclosed to provide protection from the wind and insects and allow more extensive use throughout the year.

4.2.6.1 Behavioural Traces

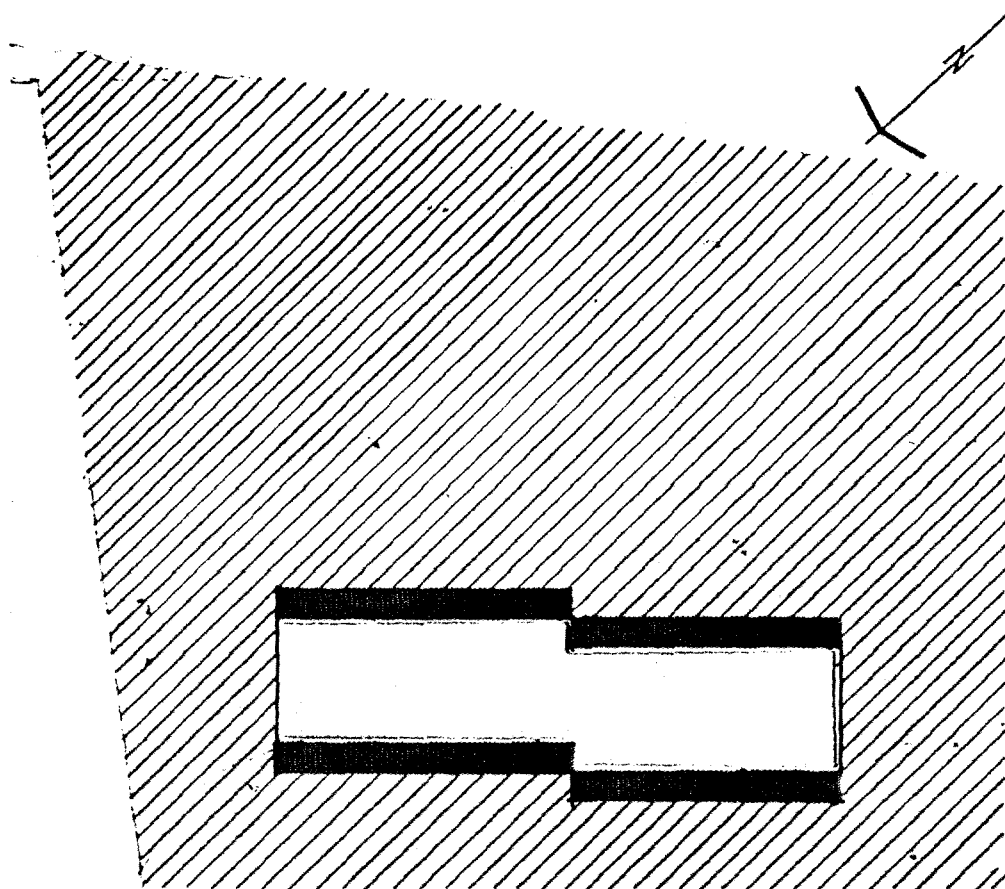
There are few behavioural traces on the site. This is likely due to regular maintenance, restricted access, the low number of children in the building and the fact that residents are discouraged from leaving personal effects in the semi-public area.

The landscape plan, however, includes many paths which curve about for no apparent reason. It is probable that the grass will show more signs of wear and tear with time in key short cut locations.

4.2.6.2 Behavioural Observations

The primary function of the semi-public area is as an aesthetic feature. It is not extensively used given the number of people in the condominium project. Residents do, however, enjoy walking along the riverside, swimming in the pool, and sun tanning in the open areas. Often personal chairs are brought from the dwelling unit. The small gazebo, which is equipped with a table and chairs, is particularly attractive to elderly people who wish protection from the sun or rain.

The balconies, which are designed as an integral part of the dwelling unit, are well used. They offer a pleasant environment from which to view the semi-public area or more distant views.



PRIVATE SPACE



SEMI-PRIVATE SPACE

Figure 17a: Spatial Analysis
High-Rise Condominium

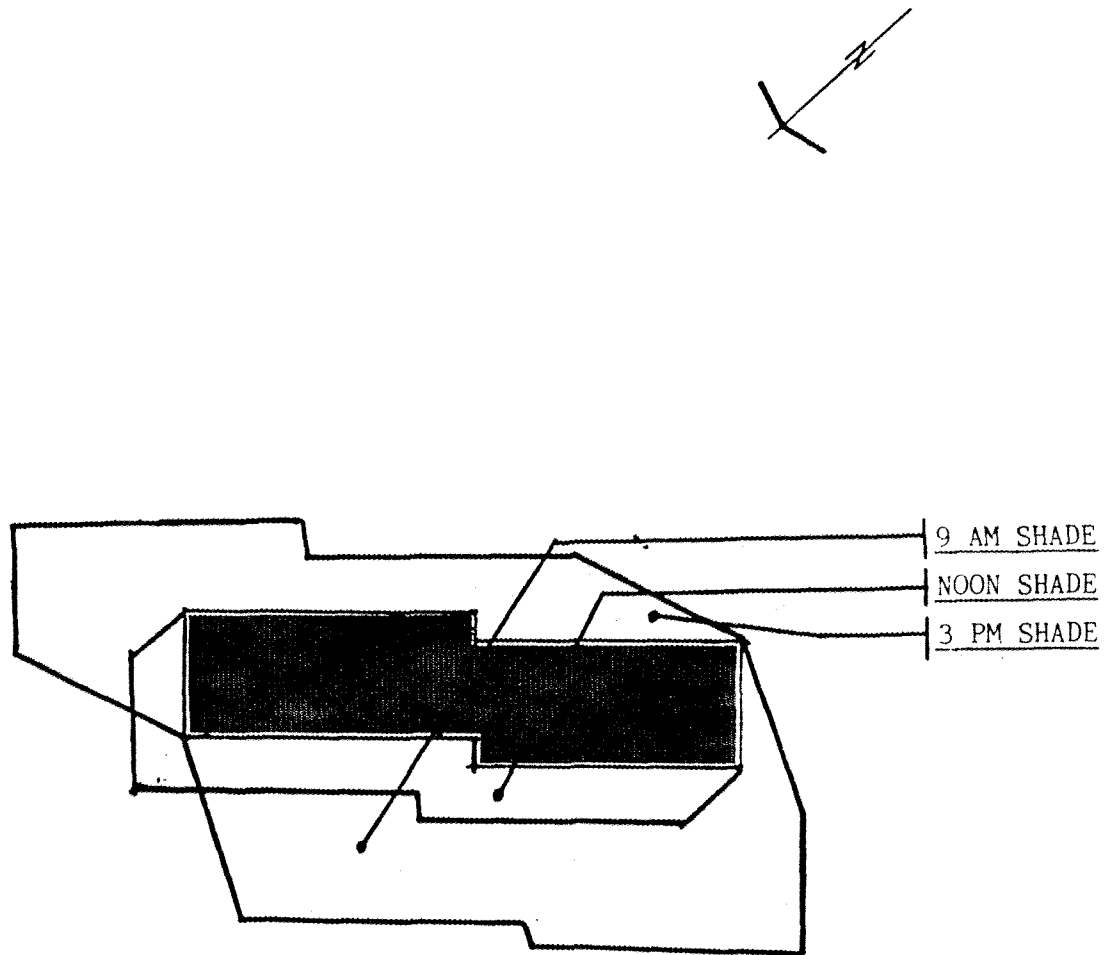


Figure 17b: Sun Shade Analysis
for July 29
High-Rise Condominium

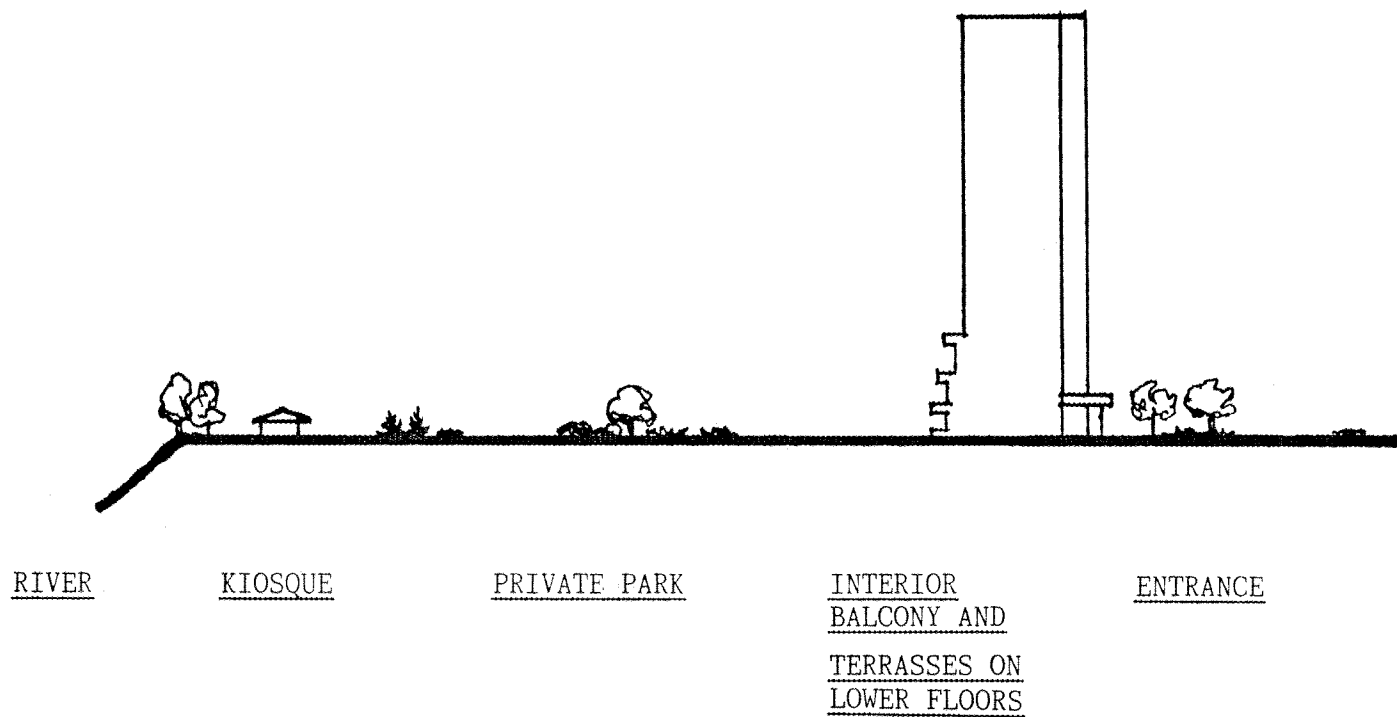


Figure 17c: Elevation
High-Rise Condominium

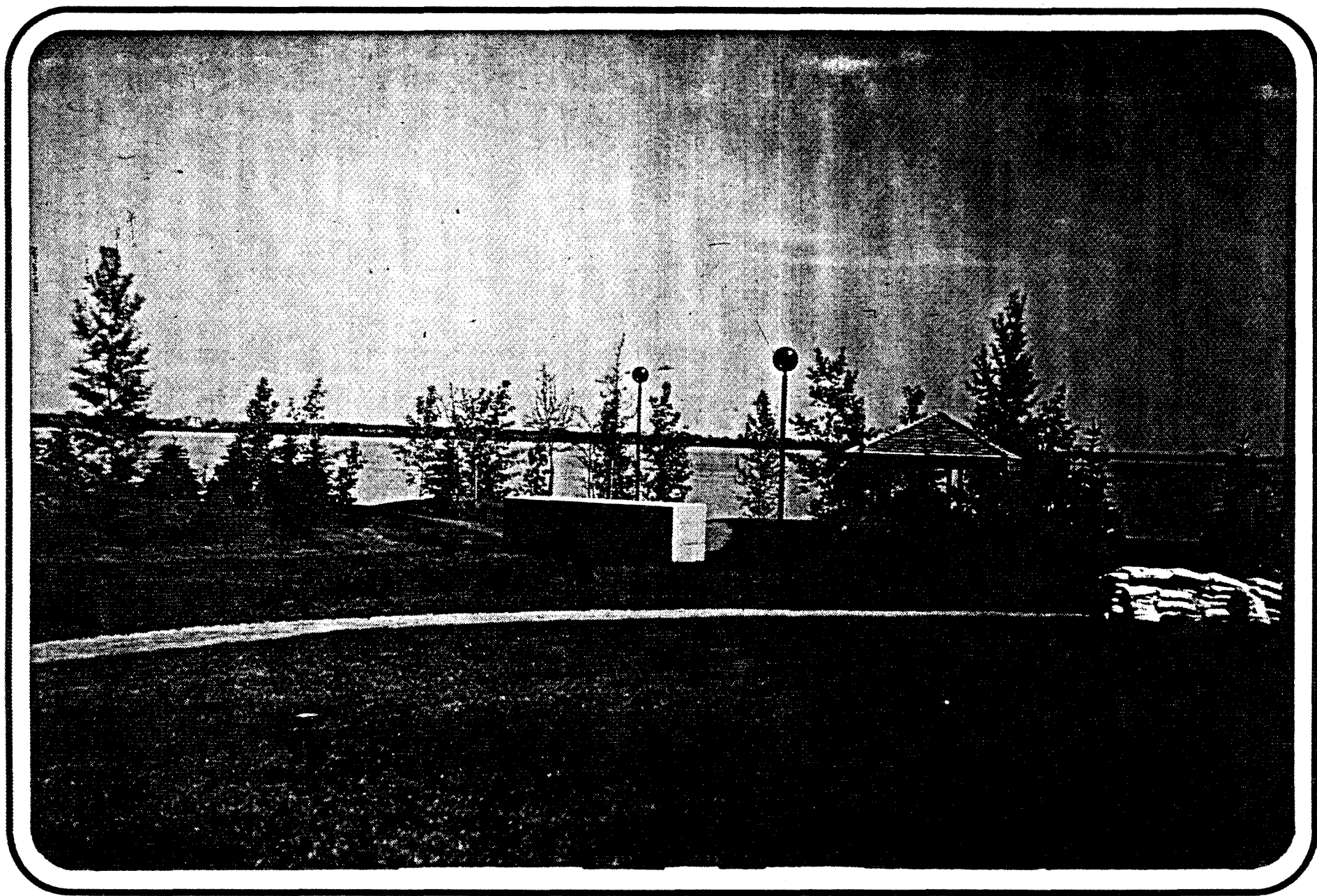


Figure 17d: Common Area

High-Rise Condominium

CHAPTER 5

RESIDENT SURVEY

Chapter 5: Resident Survey

The resident survey was designed to test the hypothesis that people living in different residential environments on Nuns' Island have different views about residential quality and development issues. This hypothesis is expected because residents in each of the housing groups made different trade offs among environmental amenities, such as housing type, private outdoor space, community space and access to pathways at the time they choose their current home. Some of the differences in environmental amenities may be expected to result in different levels of overall satisfaction and point to a poor fit between resident expectations and the environment. It is also likely, however, that there will be differences in the socio-economic composition, values and behavioural patterns of the groups in each housing type which make a different combination more satisfying. An evaluation of the extent to which the environment offered by each residential type, and the Island generally, match expectations and behaviour provides one measure of residential congruence.

The ways in which people use and try to modify their environment are considered in greater detail in the following chapter which presents the results of the detailed survey.

The questionnaire (Appendix 1) covered the following topics:

- personal and household characteristics
- overall satisfaction with the neighbourhood
- residential values
- satisfaction with neighbourhood amenities
- outdoor activity patterns throughout the neighbourhood
- satisfaction with outdoor space around the home
- sense of personal effectiveness and extent of involvement in neighbourhood activities
- attitudes toward new development

Each of these topics will be addressed separately in this section of the report.

In all 401 telephone questionnaires were administered by Sorecom Inc, a professional survey firm, to a stratified sample designed to ensure an adequate number of respondents for each of the five housing groups. Of these 1 questionnaire was disqualified due to a number of invalid responses.

TABLE 5.1: Sample Structure

Group	Housing Environment	Total Households (1986)	Respondents
1	owner occupied/semi-detached	339	67
2	owner occupied condominium	725	81
3	rented townhouse	260	80
4	rented low rise apartment	1977	90
5	rented high rise apartment	863	82
TOTAL		4164	400

The differences in the sample ratios for each residential category require that weights be applied to represent the views of the overall community. These weights were obtained by dividing the total number of households by the number of respondents in each category.

The bulk of the analysis, however, is based on the unweighted sample. This is appropriate as the primary aim is to examine the association between different variables rather than estimate global parameters. For example, for this study, it is more important to know the extent to which people living in different housing environments have different participation rates in community activities rather than the total number of people in each housing group who have participated in particular activities.

5.1 Sample Characteristics

5.1.1 Age

The age of respondents differed significantly between the housing environments. Generally, owners were older than renters. The majority of owners fell between 35 and 54 years of age while the age of most renters ranged from 25 to 44. There was, however, only one respondent greater than 65 years of age in an owner occupied townhouse. Elderly respondents were more likely to live in condominiums or rented apartments.

5.1.2 Gender

The sample was not stratified with respect to gender. Women respondents were in the majority for most environments. They ranged from 48.2% of condominium respondents to 62.7% of respondents in owner occupied townhouses.

5.1.3 Language

While the survey did not provide a true indication of language an approximation of the linguistic differences may be made based on the language used for the interview. In all 74% of the interviews were conducted in French and the remainder in English. The

distribution of those responding in French ranged between 67.5 for townhouse tenants to 80% for low rise tenants.

5.1.4 Household Size / Space

The number of people in each household varied significantly between housing environments with the majority of townhouse households (owned or rented) having 3 or more people while the majority of condominium and apartment households contained 2 or fewer people. This is of-course to be expected due to the difference in number of rooms in each dwelling type. There were also significant differences between the condominiums and high rise apartments with 56% of the former containing 2 people while 54% of the latter were occupied by a single person.

5.1.5 Length of Residence at Current Address

As property has only been available for purchase on the Island relatively recently it is to be expected that respondents in rented units will have resided for longer periods of time at the same address. Interestingly, however, the median length of residence for all groups is 2-4 years. While this reflects the high turnover among renters a significant number of renters, - between 23% and 30% - were long time residents who had stayed put for 6 years or more.

5.1.6 Previous Residence

The majority of respondents in all housing groups (62% - 77%) owned their previous house. This was a surprising finding as it was expected that fewer tenants than owners would have owned a house previously. The group least likely to have owned their previous house were condominium residents, yet only 38% of this group had been renters.

The majority of respondents in all housing groups (50% to 62%) had previously lived in an apartment or condominium which in most cases was greater than four stories. This suggests that the population sampled has had significant experience both with home ownership and high density residential environments. Condominium respondents were most likely to have owned a high rise condominium previously.

Approximately 25% of respondents had lived in detached or semi-detached housing. This group was most likely to be currently living in a condominium or rented townhouse.

5.1.7. Previous Residential Location

Many respondents had lived previously on the Island. In fact the majority of respondents in private townhouses (67%) had lived elsewhere on the Island at some time in their residential history as had about 50% of respondents in condominiums and rented townhouses.

Respondents with no previous experience on the Island were most likely to be living in apartment units, 73% of low-rise, and 69% of high-rise respondents fell in this category.

Table 5.1.7 Residential Location Prior to
Coming to Nuns' Island (%)

Location	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Overall
City of Montreal	20.90	18.52	22.50	17.78	21.95	20.25
"Mature Suburbs"	17.91	24.69	20.00	20.00	24.39	21.50
Verdun, Lasalle	4.48	3.70	3.75	7.78	6.10	5.25
Rest of Montreal area	20.90	28.4	16.26	24.45	15.86	21.25
Rest of Quebec	16.42	16.05	12.50	18.90	20.74	17.00
Rest of Canada	2.99	1.23	2.50	5.56	2.44	3.00
U.S.A.	0.00	2.47	6.25	0.00	1.22	2.00
Elsewhere	4.48	2.47	10.00	2.22	2.44	4.25
TOTAL	67	81	80	90	82	400

Immediately prior to moving to the Island respondents were most likely to have lived in the Montreal area (68%). The vast majority of these respondents came from the City of Montreal and the relatively wealthy, mature suburbs - Westmount, Town of Mount Royal, Montreal West, Cote St Luc, Snowdon, Cote des Neiges, Outremount and NotreDame de Graces. Only 2% were from the United States while 10% were from countries outside of North America. There were no significant differences in previous location between respondents in each housing group.

5.1.8 Household Income

Household income was found to vary significantly between housing group with the majority of owners and townhouse tenants receiving more than \$65,000 - a sum which was equalled by only 10% of low-rise tenants and 23% of high-rise tenants. Apartment tenants had a median income of \$25,000 - \$35,000 annually. Only 9% of households sampled had incomes of less than \$25,000 per year.

5.2 Survey Analysis

5.2.1 General Satisfaction

A question concerning general satisfaction was asked to establish respondents' overall assessment of the congruence between their needs and expectations and the neighbourhood. Essentially the question summarizes the trade off among neighbourhood attributes which respondents experience in their particular housing environment. As respondents selected the particular environment in which they are living fairly high ratings for satisfaction are to be expected.

The vast majority of Island residents (96%) are at least somewhat satisfied with their neighbourhood and almost a clear majority (49.8%) indicated that they were very satisfied. In fact the number of respondents indicating that they were somewhat unsatisfied, very unsatisfied or indifferent were so slight that the chi square statistic was not a valid measure for the full range of responses.

Statistically significant differences were evident, however, when the range of responses was collapsed to distinguish those who were very satisfied from those who indicated they were somewhat satisfied, somewhat dissatisfied or very dissatisfied. (Table 5.2.1, $X^2=15.6$, $p<0.01$) Here it was evident that there is a sharp distinction between owners and tenants with the majority of owners expressing less satisfaction with the overall neighbourhood than tenants. The highest levels of satisfaction was expressed by apartment tenants while the condominium owners were the least satisfied. The reasons for these different levels of satisfaction will be explored below.

Table 5.2.1 General Satisfaction (%)

General	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
satisfied	37.31	32.10	51.25	55.56	56.10	49.8
less sat.	62.69	67.50	47.44	44.44	43.90	50.1
TOTAL	67	81	80	90	82	400

Chi-square: 15.6, $p<0.01$

Note: Total percentages may not add to 100 due to rounding and exclusion of indifferent respondents

The collapsed range distinguishing between two levels of satisfaction will be used throughout the analysis as a reasonable number of respondents in each housing group fall in each satisfaction category.

5.2.2 Respondent Values

The value orientation of respondents was assessed with questions concerning: (1) the most important characteristic of a neighbourhood, (2) the primary reason for coming to the Island, (3) the primary reason for selecting their particular home and (4) a series of questions dealing with the merits of the housing mix, courtyards, pathways, and the bike path. It was expected that respondents in each of the housing groups would express different values with respect to each of these items.

5.2.2.1 Important Neighbourhood Characteristics

Green space and nature were first on the list of ideal neighbourhood characteristics for almost one-half of the households on the Island (47.7%). The prelevance of these values were not associated with different housing environments as the percentage of respondents mentioning these items varied from only 44.4% (condominium owners) to 52.4% (high rise apartment tenants).

While, overall, the values of respondents were not significantly different, it is interesting to note that the second most prevalent response differed between housing groups. Owners were more likely to mention accessibility as the second most important neighbourhood characteristics while tenants emphasized quiet.

5.2.2.2 Primary Reason for Coming to the Island

As might be expected, given the value orientation of Island residents discussed above, the natural ambience of the Island was the primary attraction for the largest number of households (48.3%) when they choose to move to the Island.

Significant differences between housing groups were noted ($\chi^2=23.9$, $p<.05$). While respondents from all housing groups were most likely to mention natural ambience as the primary reason for coming to the Island, substantially higher percentages of tenants mentioned these features. Accessibility to the autoroute and the downtown area were almost as important as natural ambience for owners.

Table 5.2.2.2 Primary Reason for Coming to Nuns' Island

REASON	GROUP					
	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
proximity to work	10.45	9.88	5.06	14.44	12.20	12.28
proximity to downtown	32.84	32.10	24.05	7.70	20.73	17.75
natural ambiance	38.81	38.27	53.16	53.33	47.66	40.32
other	17.91	19.75	17.72	24.44	19.61	21.66
TOTAL	67	81	79	90	82	399

Chi-square: 23.9, $p < 0.05$

5.2.2.3 Primary Reason for Selecting the Current House

The quality of outdoor space was also the major factor in the selection of the current home of Island residents (27.9%) although this amenity was closely followed by the characteristics of the interior space of the dwelling (24.5%).

Although outdoor space was the most important factor for all but low-rise tenants (who stressed indoor space) there were significant differences between housing groups ($X^2=44.6$, $p < 0.01$). Indoor space was especially important to townhouse owners, townhouse tenants and low-rise apartment tenants. Views were more often mentioned than indoor space by condominium owners and high-rise tenants.

Table 5.2.2.3 Primary Reason for Selecting Current Home (%)

REASON	GROUP					
	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
view	3.03	16.88	7.89	3.45	23.17	10.18
cost	9.00	6.40	3.95	12.64	3.66	8.85
indoor space	21.21	11.69	27.63	32.18	18.19	24.54
outdoor space	30.30	31.17	31.58	24.14	31.71	27.91
accessibility	6.06	9.09	6.58	8.05	2.44	6.77
other reason	30.30	24.68	22.37	19.54	20.73	21.73
TOTAL	66	77	76	87	82	388

Chi-square: 44.6, $p < 0.01$

5.2.2.4 Valued Amenities

The vast majority of Island residents think that the mix of housing types (77.2%), the pathway system (97.5%), interior courtyards separated from the roadways (98.3%) and the bike path (96.1%) are good or very good development ideas.

Table 5.2.2.4 Valued Amenities
(% indicating amenity was a good or very good idea)

Amenity	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
housing mix	64.60	79.49	75.00	79.76	78.67	77.19
pathway system	93.85	91.14	97.88	100.00	98.68	97.53
courtyards	95.08	93.33	97.30	100.00	100.00	98.27
bikepath	97.97	97.53	92.50	98.89	89.02	96.05

The lack of negative opinions for all but the mix of housing required that the ranges be collapsed to two categories - "very good idea" and "good" to "very bad idea" for statistical tests. When this was done, however, no significant differences were evident between the respondents in different housing groups. This finding is somewhat remarkable due to the very different exposure to amenities which residents have in each housing group. The pathways and courtyards exist only in the areas developed by Metropolitan Structures Incorporated for rental housing. The most direct exposure to both amenities is felt by townhouse tenants whose patios abut the courtyards and pathways. All of the respondents in this setting were in favour of these amenities.

5.2.2.5 Overall Values

Clearly the findings discussed above concerning the values of respondents do not offer substantial support for the hypothesis that residents in different housing groups will have significantly different value perspectives. On the contrary, the similarity of values among residents is remarkable. Most Island residents place a high value on the presence of both managed green space and natural settings. For many these amenities are as important as the interior qualities of their dwelling units. While tenants are somewhat more likely to value natural amenities owners also list this as the most important community value. Accessibility to the autoroute and downtown area is also of importance to Island residents and most especially to owners.

What is especially striking is the absence of social or community values. For example only 15 of the 400 respondents mentioned good neighbours or the environment available for children as the most important characteristic of the ideal neighbourhood and only

20 mentioned social arrangements or child rearing as the major reason for selecting their dwelling. While these questions allowed only one response it is likely that these findings differ greatly from other neighbourhoods. This topic will be discussed further in the following chapter which presents the results of the detailed questionnaire.

5.2.3 Satisfaction with Neighbourhood Amenities

The extent to which respondents were satisfied with specific neighbourhood amenities was assessed. For each amenity respondents were asked to indicate whether they were very satisfied, somewhat satisfied, dissatisfied, very dissatisfied or indifferent. Essentially these questions concerned the degree of "fit" between respondents' environmental expectations and experiences.

As noted above, it is expected that the degree of satisfaction will be fairly high due to the fact that each respondent elected to live in their particular situation. The levels of satisfaction with specific amenities may be expected to differ, however, due to the different expectations of residents living in each housing group and the environmental amenities available in that setting.

Table 5.2.3 Satisfaction with Neighbourhood Amenities
(% indicating that they were very satisfied with amenity)

Amenity	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
green space	41.79	46.91	60.00	68.89	63.41	61.17
recreation facilities	24.62	28.95	34.18	24.72	30.86	27.30
variety of stores	8.96	9.88	8.86	8.89	7.41	8.76
mix of people	44.62	44.30	48.10	29.89	37.50	36.34
friendliness of neighbours	50.77	48.72	55.70	30.34	34.62	37.62
playing space	31.25	20.97	43.06	25.97	20.00	25.64
upkeep	16.42	35.80	47.50	50.00	48.78	44.39
traffic	34.33	36.25	68.35	51.11	39.02	45.73
parking	81.82	76.54	79.75	80.00	64.94	79.96

5.2.3.1 Amount of Green Space

Overall 93.7% of households on the Island are satisfied with the amount of green space available. This is to be expected since there are extensive managed park areas in the zone developed by MSI, a golf course, and substantial natural areas.

There are, nonetheless, significant differences among housing groups which are evident when those who were indifferent are excluded and the satisfaction scale is collapsed to distinguish between only very satisfied and less satisfied respondents. ($X^2=15.9$, $p<.01$). While the clear majority of renters are very satisfied (60.0 - 68.9%) a majority of owners are less satisfied (51.9 - 58.2%). This finding reflects the fact that no green space has been set aside since MSI completed its rental project.

5.2.3.2 Variety of Recreational Facilities

Island residents are less satisfied with recreational facilities than they are with the amount of green space available with the majority (51.0%) indicating they were "somewhat satisfied". Still overall satisfaction levels are high (78.3%).

Significant differences between housing groups were noted when the dissatisfied categories were collapsed and the indifferent respondents excluded ($X^2=17.4$, $p<0.05$). Here the owners and townhouse tenants were the most likely to indicate they were dissatisfied (27.7% townhouse owners; 26.5% condo owners; 26.0% townhouse tenants 12.1% low-rise tenants; 12.7% high-rise tenants).

5.2.3.3 Variety of Stores on the Island

Island residents are evenly split on the adequacy of stores with 51.2% expressing dissatisfaction and 2.7% indifference. Very few households (8.8%) are "very satisfied". No significant differences between housing groups were noted.

5.2.3.4 Mix of People and Friendliness of Neighbours

Questions concerning the mix of people and their interests and the friendliness of neighbours received very similar responses. In both cases just under 80% expressed satisfaction while about 15% of Island residents are "indifferent".

No significant differences were evident between housing groups. Close examination of the data, nonetheless, indicates that the level of agreement between the groups is primarily due to consistent "somewhat satisfied" responses. Apartment tenants are more likely to be "indifferent" and less likely to be "very satisfied" with these variables than the other groups. The lack of statistical significance with respect to these variables may therefore be due more to the need to collapse scales to achieve sufficient cell frequency for the Chi-square test than uniform levels of satisfaction with the social context.

5.2.3.5 Playing Space for Children

Most Island residents are satisfied with the playing space for children (62.4%) and as a substantial number are "indifferent" (27.7%) relatively few (10.8%) expressed dissatisfaction.

There were significant differences between the housing groups ($X^2=18.9$, $p<0.05$) which were evident when "indifferent" respondents were excluded and the "somewhat and very unsatisfied" groups were collapsed. The townhouse tenants were the most likely to be "very satisfied".

5.2.3.6 Upkeep

The general upkeep of the neighbourhood is frequently an issue affecting satisfaction of residents. In this study while the overwhelming majority of households consider the upkeep satisfactory (87.5%) there are significant differences between housing groups ($X^2=33.7$, $p<0.01$).

Satisfaction levels are highest among the tenants where close to the majority of households are "very satisfied" (47.5 - 50.0%) and relatively few express dissatisfaction (7.32 - 18.8%). It is interesting, nonetheless that the level of dissatisfaction is highest among the townhouse tenants who have the greatest exposure to the outdoors.

The owners are substantially less satisfied with only 16.4% and 36% of townhouse owners and condominium owners respectively indicating they were "very satisfied". A relatively high percentage of these respondents were dissatisfied (22.2 - 26.9%).

It is important to note that the responsibility for general upkeep varies between owned and rented sections of the Island. Metropolitan Structures Incorporated developed the rental units along a "planned unit development" approach leaving many open areas, courtyards and pedestrian pathways which they maintain - apparently relatively well. The City of Verdun is responsible for land bordering on the roadways, recreational facilities and several parks.

5.2.3.7 Traffic Level

While 86.4% of households are satisfied with the volume of traffic on the street serving their home there are differences in the degree of satisfaction which vary with respect to the housing groups ($X^2=33.0$, $p<0.01$). The most satisfied groups are townhouse and low-rise apartment tenants where a clear majority were "very satisfied" (51.1% low-rise, 68.4% townhouse). Thus the set backs, and street layout of these units is successful in protecting residents from adverse effects of traffic.

The remaining three groups expressed less satisfaction. The condominium owners were least satisfied with 22.0% expressing dissatisfaction.

5.2.3.8 Parking

The vast majority of households on the Island are satisfied with the proximity of their parking space to their home (96.4%) with approximately 80% of respondents in private townhouses, rented townhouses and low-rise apartments indicating that they were "very satisfied". Satisfaction was significantly less in the higher density areas with 76.5% of condominium owners and 64.9% of high-rise apartment tenants stating they were "very satisfied".

It is particularly interesting that low-rise tenants did not indicate greater dissatisfaction with the location of their parking space. Many of these residents live in units which are some distance from their assigned parking space. It appears that residents of these areas are willing to trade off the distance to their parking space with the advantages of having an apartment in a "park-like" setting.

5.2.3.9 Summary of Satisfaction with Neighbourhood Amenities

As expected a substantial majority of Island households are satisfied with the amenities in their neighbourhood. They are particularly satisfied with the amount of green space on the Island and the proximity of their parking space to their home. The greatest level of dissatisfaction was expressed with the variety of stores on the Island while significant, but substantially less dissatisfaction was expressed with the recreational facilities, playing space for children, general upkeep and traffic. While only about a third of respondents were very satisfied with the mix of people and friendliness of neighbours few were dissatisfied with these variables and many were indifferent.

There were significant differences in the levels of satisfaction among the different housing groups for all but the variety of stores, the mix of people and the friendliness of neighbours. Generally the owners were less satisfied than the tenants - a finding which reflects the lack of green space and play areas in their sections of the Island, the lack of recreational facilities, the layout of streets and the level of maintenance provided by the City.

5.2.4 Activity Patterns

Given the different population composition in each housing group and the substantial differences in proximity to public amenities on the Island it was expected that the groups would have different activity patterns which might be associated with levels of satisfaction and attitudes toward new development. Consequently respondents were asked to state the frequency of visits to the woods, parks, golf course and stores. The results are presented in Table 5.2.4.

TABLE 5.2.4. Activity Patterns (Weighted %)

Frequency	Woods	Parks	Golf	Stores
daily	13.2	23.2	5.0	34.6
weekly	30.4	39.2	26.7	57.8
monthly	27.4	14.7	11.2	4.8
rarely	16.8	12.2	10.6	0.3
never	12.2	10.7	46.4	2.5
	100.0	100.0	100.0	100.0

The results indicate the important role of all four items for Island residents. As might be expected the stores are visited with the greatest frequency with almost all shopping at least once a week. Parks are second in order of frequency with a substantial number of daily visits by households with children.

The relative frequency of visits between the woods and golf course is of some interest. The woods attracts much more activity with a substantial majority of respondents visiting at least once a month. The golf course generates much less activity as nearly one-half of the respondents have never visited it. This finding, by itself, does not indicate the full relative value of the amenities, however, as many people may appreciate these types of features for reasons not related to activity patterns. In particular, the golf course offers an extensive green area located at the entrance to the Island and according to all accounts (as discussed below) is highly valued as a visual amenity.

Curiously, there were no significant differences between the frequency of visits to any of the four amenities and housing groups. This indicates that these amenities are essentially shared goods which are equally used by all Island residents.

5.2.5 Satisfaction with Immediate Outdoor Space

Each of the housing environments has a very different relationship to immediate exterior space as noted in Chapter 4. These differences, together with differences in household expectations and behaviour were expected to influence satisfaction levels of residents. Three main types of outdoor space were considered separately: private space, semi-public space and public space. Public space did not include roadways. Respondents whose dwelling units were adjacent to or overlooked these types of spaces were asked to express their degree of satisfaction with the space on a 4 point scale from "very satisfied" to "very unsatisfied" and to state what they liked most and least about the space.

5.2.5.1 Private Outdoor Space

Three hundred and sixty nine of the 400 respondents reported that they had a private balcony, patio or yard. The majority (60.0%) of these respondents were "very satisfied" with this space while

a substantial number of the remainder indicated they were "somewhat satisfied" (29.0%). Overall satisfaction rates were about the same for respondents with each of the three different types of private outdoor space. Only 11.1% of the overall sample were dissatisfied with their private outdoor space.

Table 5.3.4.1a Satisfaction with Private Outdoor Space (%)

SPRIV	GROUP					
	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
very satisfied	64.66	73.66	48.72	57.95	58.62	60.00
somewhat sat.	31.82	19.74	39.74	29.55	31.03	29.00
somewhat unsat.	10.61	2.63	8.97	7.95	8.62	7.40
very unsat.	3.03	3.95	2.66	4.66	1.72	3.70
TOTAL	66	76	78	88	68	366

Significant differences were evident in satisfaction levels among the housing groups when the satisfaction scale was collapsed to distinguish between those who were "very satisfied" and those who were less satisfied ($\chi^2=10.7$, $p<0.05$). Condominium owners were more likely to be very satisfied with their private space (73.7%) than were the other groups. Respondents in rented townhouses were the least likely to be very satisfied (48.7%) while the other groups ranged between 54.5 and 58.6%.

The satisfaction of condominium owners with their private outdoor space is very high whether they own a balcony (75%), patio (81.0%) or yard (88.9%). This suggests that the design features of these spaces are of excellent quality. The townhouse owners did not express as much satisfaction. Here 60.5%, 58.1% and 55.6% were very satisfied with their balconies, patios and yards respectively. The inverted satisfaction scale between condominium owners and townhouse owners may in part be due to the different expectations of each group and the possibility of overlooking interesting community space - something which is much more available in the condominium arrangements.

Among the tenant groups little difference was evident for townhouse or high-rise apartment residents with different types of private outdoor space. Large differences, however, were evident for the low-rise tenants where the percentage of those who were "very satisfied" went from 52.6% of those with balconies to 89.0% for those with patios and 100% for those with a yard. This finding reflects the low quality of the balconies in some of the low-rise buildings erected by MSI and the desirability of providing patios for ground level tenants.

Table 5.2.5.1b Most Pleasing Features of Private Outdoor Space
(Number of Respondents)

1. View	94
2. Size	57
3. Privacy	44
4. Nature	33
5. Sun	25
6. Quiet	17
7. Nothing	17
8. Outdoor Access	13
9. Outdoor Activity	11
10. Other	58
Total	369

The view was especially appreciated by condominium owners, high-rise tenants and low-rise tenants where it was the primary attraction for the greatest number of respondents. Privacy and nature (grass, flowers, wildlife) were mentioned most often by townhouse owners.

The size of private outdoor space was mentioned as a positive feature more frequently by condominium owners, low-rise apartment tenants and high-rise tenants than by other groups. Privacy received a significant amount of attention from all but high-rise tenants.

Table 5.2.5.1c Least Pleasing Features of Private Outdoor Space
(Number of Respondents)

1. Nothing	147
2. Size (too small)	42
3. Insects	20
4. Noise	19
5. proximity of neighbours	16
6. poor view	16
7. poor maintenance	13
8. lack of privacy	12
9. lack of sun	8
10. lack of fences	8
11. animals feces	6
12. Other	62
Total	369

A high level of satisfaction is evident from the fact that most respondents in all housing groups indicated that "nothing" displeased them with their private space. Of those who did have something to complain about size was the most frequent response for all but condominium owners.

Insects were especially likely to bother condominium owners and high-rise tenants. Noise was a problem for townhouse owners and condominium owners while high-rise tenants complained of a lack

of sun and view. Both townhouse owners and tenants complained of a lack of privacy. Animal feces in private outdoor space was a problem primarily for townhouse tenants.

5.2.5.2 Semi-Public Space

Approximately half of the sample overlooked semi-public space. Of these 66.9% were "very satisfied" and 30.1% were "somewhat satisfied" with this type of space. Satisfaction levels were higher for condominium owners and townhouse tenants with patios than those with balconies. Interestingly, however, the reverse was true for low-rise apartment tenants. This likely reflects the poor relationship between patios and semi-public space in MSI's Phase III development.

Table 5.2.5.2a Satisfaction with Semi-Public Outdoor Space (%)

SSEMIP	GROUP					
	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
very sat.	26.57	77.94	62.50	66.67	69.68	66.90
somewhat sat.	42.86	19.12	37.50	31.11	37.10	30.10
somewhat unsat.	28.67	1.47	0.00	0.00	1.61	1.30
very unsat.	0.00	1.47	0.00	2.22	1.61	1.75
TOTAL	7	68	24	45	62	206

As with private space, condominium owners indicated the highest levels of satisfaction with their semi-public space. Townhouse owners who overlooked semi-public space were the least likely to be very satisfied with this arrangement. While it is not possible to identify the exact location of the townhouse owners who were dissatisfied with their semi-public space it is likely that they formed part of the Wilson-Corot group of homes discussed in Chapter 4. Satisfaction levels were higher among tenants.

The differences in levels of satisfaction are significant ($\chi^2=10.0$, $p<0.05$) when the scale is collapsed to distinguish between those who were "very satisfied" and less satisfied.

Table 5.2.5.2b Most Pleasing Features of Semi-Public Outdoor Space

1. planning and maintenance	41
2. facilities	31
3. green space	30
4. privacy (restricted use)	17
5. social opportunity	15
6. quiet	13
7. proximity to river	11
8. trees	10
9. possibility of walking about	9
10. other	34
Total	211

Planning and maintenance were especially important attributes of semi-public space for condominium owners. Respondents from this housing group were also likely to report facilities and green space.

Low-rise tenants emphasised green space, trees, planning and maintenance and restricted use. High-rise tenants were primarily interested in the facilities, proximity to the river, planning and maintenance.

Townhouse tenants were most likely to mention the opportunities for socialization and green space with a significant number finding nothing praiseworthy. This ambivalence is likely due to the lack of territorial definition as discussed elsewhere in this report.

Table 5.2.5.2c Least Pleasing Features of Semi-Public Outdoor Space
(Number of Respondents)

1. Nothing	111
2. Dogs	17
3. use by non-residents	10
4. lack of privacy	9
5. proximity of neighbours	8
6. parking	5
7. crowded	5
8. children	4
9. poor maintenance	4
10. swimming pool	4
11. other	34
Total	211

As with private space, the majority of respondents in all housing groups found nothing to complain about. Dogs, and especially dog feces, were the subject of the greatest concern of tenants. Social concerns were mentioned by townhouse owners, townhouse

tenants and high-rise tenants. The latter group was especially concerned about non-residents of their building using the pool.

5.2.5.3 Public Space

About one quarter of the sample overlooked what they considered to be public space other than a roadway. This space may in fact not be public - as is the case with the forest which is owned by MSI - although it appears to be public due to the absence of restrictions on use. Of these respondents the majority were "very satisfied" (75.2%) or "satisfied" (18.5%) with this arrangement. No significant differences were found between the levels of satisfaction among the different housing groups.

Table 5.2.5.3a Satisfaction with Public Outdoor Space (%)

SPUBLICS	GROUP					
	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
very sat.	62.50	78.57	65.22	76.92	73.33	75.20
somewhat sat.	12.50	14.29	30.43	15.38	26.67	18.50
somewhat unsat.	12.50	0.00	0.00	7.69	0.00	5.00
very unsat.	12.50	7.14	4.36	0.00	0.00	1.20
TOTAL	8	14	23	39	30	114

In contrast to the observations for semi-public space, condominium owners, townhouse owners and townhouse tenants with patios were less likely to indicate they were "very satisfied" than their neighbours with balconies. The reverse is true for low-rise tenants who have a greater likelihood to be "very satisfied" with adjacent public space if they have a patio rather than a balcony.

Table 5.2.5.3b Most Pleasing Features of Public Outdoor Space
(Number of Respondents)

1. green space	29
2. woods / trees	23
3. maintenance / beauty	14
4. quiet	11
5. view	11
6. trees	9
7. private feeling	3
8. good for children	3
9. other	11
Total	114

Natural settings - green space, woods, trees - were clearly the most impressive features of public space for all housing groups.

Table 5.2.5.3c Least Pleasing Features of Public Outdoor Space
(Number of Respondents)

1. nothing	63
2. dogs	9
3. poor maintenance	5
4. new construction	5
5. noise	4
6. garbage	3
7. lack of parking	3
8. other	22
Total	114

Most respondents in all housing groups found little to complain about with respect to the public space adjacent to their building. Dogs were the primary complaint of tenants. Low-rise tenants were also concerned about poor maintenance and new construction. High-rise tenants complained about children using the public outdoor space.

5.2.5.4 Summary

Most people in all residential settings are satisfied with the type of outdoor space which is available to them. All three types of space - private, semi-public and public have important roles to play.

It is interesting that the condominium owners are the most satisfied with their outdoor space. This reflects the attention which developers of several condominium projects have given to private balconies and patios as well as the provision of an attractively landscaped semi-public space which contains several shared facilities such as a swimming pool. The possibility of having a relatively small but private space close to the unit and the benefits of sharing a larger space with neighbours is attractive.

The clear definition of private semi-public and public space is important. Townhouse owners who were the most ambivalent about the desirability of a private/semi-public allocation of space were relying on informal rules (see chapter 6) to distinguish territories. Greater satisfaction was evident among townhouse tenants who did not have the same level of ambivalence about ownership.

A good view is the primary attraction of private balconies for condominium and apartment residents although the size and degree of privacy are also important factors. Privacy, size and direct access to nature are key patio factors for townhouse residents.

Careful attention to landscaping is vital to the success of semi-public space. Any facilities which are provided need to be well integrated in a landscape plan. Some control over the use of this space by non-residents and dogs is important for residential satisfaction.

Proximity to public space which offers a natural landscape is agreeable for most residents. There is, however, a need for a semi-public transition between private patios and the public domain. Dogs, poor maintenance and noise decrease the attractiveness of this space.

5.2.6 Community Participation

Three questions in the telephone survey concerned the level of community participation of respondents. These deal with whether respondents had (1) attended a meeting addressing community problems, (2) signed a petition or (3) organized or joined an action group. The detailed survey which allowed a much more interactive discussion of community affairs and the role played by respondents included topics which probed the feeling of personal effectiveness which respondents felt with respect to development issues and the planning approaches considered most appropriate.

It was expected that the owners, whose plight with respect to taxes and development issues frequently appeared in the local papers, would play a more active role in community affairs. There was, however, some reason for doubt because the primary citizen's group on the Island, the Nuns' Island Residents Association, had emerged initially as a tenants association.

Table 5.2.6 Community Participation Rates (%)

	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
signed petition	86.57	90.12	71.25	73.33	73.17	77.20
attended meeting	64.18	50.62	32.50	21.11	23.17	30.90
action group member	40.30	33.33	21.52	21.11	19.51	24.50

Overall 77.2% representatives of the households on the Island had signed a petition arguing for change, 30.9% had attended at least one meeting and 24.5% had joined a community action group. This indicates a very high rate of involvement in community affairs.

Significant differences were evident in the degree of community involvement for respondents from each of the housing groups. Whereas petitions had been signed by the majority of households, the proportion was lower for tenants than owners, ($\chi^2=14.0$,

p<0.01).

This difference in the level of involvement was even more apparent for attendance at meetings ($\chi^2=44.9$, $p<0.001$). Here the majority of townhouse owners and condominium owners had attended a meeting while only a minority of the other groups had done so.

The same pattern is evident for participation on an action group, although the majority had not gone to this extent of involvement ($\chi^2=13.1$, $p<0.05$).

It is clear that the owners are inclined to play a much more active role in community affairs. While they comprise only 25.6% of the households on the Island they included 29.4% of the households which have signed a petition; 45.4% of the representatives of households who attended a meeting and 37.1% of the households which had at least one representative on an action group.

5.2.7 Attitudes Toward Development Issues

As noted in the introduction, and elaborated in the previous section new development has aroused a very considerable amount of controversy on the Island. A number of questions were therefore asked to identify the key areas which residents felt ought to be protected from development and the characteristics of new development projects which should be allowed to proceed. It was expected that there would be differences in the attitudes of residents in the different housing groups with the owners evidencing a greater acceptance of new development (with a view to decreasing taxes and generally greater acceptance of change) and the features of the early development being most strongly favoured by tenants who in fact experienced them on a daily basis.

Table 5.2.7a Attitude to Development (%)

	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
protect some areas	96.62	98.75	93.75	95.56	98.78	96.50
protect woods (1st choice)	82.81	66.00	84.00	67.44	66.14	73.06
protect golf (1st choice)	17.19	32.50	13.33	25.58	27.16	23.58

Virtually all respondents (96.5%) thought that development should be prohibited in some areas. There were no significant differences in attitude among different housing groups.

When asked what areas should be protected from development 73.1% of the sample mentioned the wooded area. This response was especially prevalent among townhouse occupants.

The golf course was second on the list of areas to protect.

Others areas to be protected include (1) all the Island (5.9%), (2) the riverside (5.0%), (3) the north end of the Island (1.9%) and (4) the landfill area (1.6%).

A particular issue which was very active at the time of the survey was whether the golf course should be developed. Respondents were asked if they were "very favourable, rather favourable", "rather unfavourable" or "very unfavourable" to development in this area.

Table 5.2.7b Attitudes Toward Development of the Golf Course (%)

GOLF	GROUP					
	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
very favourable	1.40	0.00	1.25	1.11	1.22	1.00
somewhat favourable	2.99	0.00	8.75	7.78	7.32	6.60
somewhat unfavourable	13.43	8.64	7.60	8.89	10.99	9.75
very unfavourable	80.60	88.88	77.50	76.66	76.83	79.75
indifferent	0.00	1.23	1.26	2.22	1.22	1.25
do not know	1.40	1.23	2.50	4.44	2.44	2.50
TOTAL	67	81	80	90	62	400

Only 6.5% of respondents supported development of the golf course while 89.5% were opposed. No significant differences were evident in the attitudes of respondents from different housing groups. The condominium owners were the most vehemently opposed to development in this area - 88.9% of these respondents indicated that were "very unfavourable" in contrast to between 76.7% (low-rise tenants) and 80.6% (townhouse owners) of the other groups who took this strong a stand. Indifference and not sure responses were highest among the low-rise tenants (6.7%).

The vast majority of Island households consider that it is somewhat or very important that development concepts include a pedestrian pathway system (89.4%), a mix of housing types (68.0%), fences or hedges around private yards (67.4%) and courtyards separated from traffic (90.0%). Surprisingly, there were no significant differences in attitudes toward these development concepts among the different housing groups.

Table 5.2.7c Development Concepts (% indicating concept is important)

	Private t-house	Condo	Rented t-house	L-rise apt	H-rise apt	Weighted pct
pathways	89.55	92.59	86.25	91.11	84.06	89.40
housing mix	55.14	76.54	68.75	68.89	63.41	68.00
fences	61.20	65.44	61.25	71.10	64.64	67.36
courtyards	89.56	92.59	91.25	90.00	87.80	90.03

These concepts which, with the exception of fences, are present in the earlier MSI development, meet with the general approval of residents. The fact that only fences have been implemented in the newer developments thus far suggests that the market has not been responsive to the wishes of either the owners or tenants.

5.3 Conclusions

The resident survey provided a few surprises. Chief among these is the degree of agreement among residents of all housing groups concerning residential values and development principles. While owners tended to place greater emphasis on accessibility than did tenants all placed a high value on green space and the natural setting offered on the Island.

Owners, however, were the least satisfied with their residential environment. This was largely due to the fact that many of the features of the original "planned community" had not been extended to their area. Green space, pedestrian pathways, courtyards separated from traffic and a harmonious mix of housing types were desirable to owners as well as tenants. While some of the original design ideas for the Island had been successfully transferred to condominium settings to produce desirable immediate outdoor environments less success was evident in the townhouse settings.

The lower level of satisfaction among owners, and perhaps their heightened sense of responsibility for their neighbourhood, may explain their high level of participation in community affairs.

These issues are explored in greater depth in the following chapter.

CHAPTER 6

DETAILED RESIDENT SURVEY

Chapter 6: Detailed Resident Survey

The detailed questionnaire (Appendix 2) was intended to provide a much more sensitive measure of the interaction of residents with their immediate outdoor space and the Island as a whole than was possible with the telephone survey. Essentially this survey adds "flesh" to the "skelton" revealed with the first survey. Relying primarily on open discussion, cognitive maps and image clusters, the detailed survey provides some indication of the dynamic interaction between individuals and their environment - with special reference to the perception of amenities and the ways in which respondents have or intend to modify the environment to better suit their needs and aspirations.

The results of the survey will be presented separately for each of the five housing groups. For each group consideration will be given to the following items:

- respondent characteristics
- perception of Nuns' Island as a whole
- perception, use and adaption of immediate outdoor space
- location of friends and acquaintances
- frequented places and routes taken
- perception of development issues

The analysis for this part of the study rests primarily on a synthesis of anecdotal information and graphic images. While there is no attempt to conduct statistical analysis there is a strong likelihood that these portraits reflect the range of experiences of people in the different housing groups. Each respondent was originally selected in a random sample for the telephone interviews. A random selection of those who indicated that they were willing to continue with the more detailed survey was then made with controls to ensure that at least 10 respondents in each housing groups would be represented. Time and cost limited the number of respondents to a total of 60. Table 6.0 illustrates the sample structure.

Table 6.0 Detailed Sample Structure

Telephone respondents		400
Telephone respondents willing to proceed		169
Detailed surveys completed		60
- townhouse owners	10	
- condominium owners	14	
- townhouse tenants	10	
- low-rise tenants	12	
- high-rise tenants	14	

6.1 Townhouse Owners

6.1.1 Respondent Characteristics

Most of the townhouse owners surveyed were members of young families. Only 4 of these households did not have children and all respondents were between 25 and 44 years of age.

All but two of the respondents had lived elsewhere on the Island before deciding to buy their townhouse. These respondents were therefore very familiar with the Island environment as a whole and the range of residences available. Generally they choose to live in a townhouse due to the wish for more outdoor space, greater control over their environment, the investment opportunity or the perception that it would be better for children to live in a townhouse setting.

For many the attractiveness of a townhouse setting reflects some of the characteristics of their childhood home - albeit in a denser setting. Six of the ten respondents had lived in single family homes while they were children. These respondents emphasized the quality of the outdoor space around their home. Of the remaining four respondents two had lived in denser settings while the others had lived in foreign environments which they found incomparable with their present circumstance.

The respondents were a fairly cosmopolitan group with 4 European households (2 of which were from communist bloc countries), 4 French Canadian and 2 English Canadian households. This diversity is indicative of the neighbourhood in which most of the townhouses were located. Several respondents commented that the multicultural aspect of their neighbourhood was an asset as it provides a rich social experience and a unique educational opportunity for children. In the view of one respondent the diversity also contributed to privacy as one was less likely to listen to conversations in a foreign language.

6.1.2 Perception of Nuns' Island

The persistent theme of the "city in the country" was evident in the landmarks and symbols identified and the clusters of images. Natural elements such as the woods, golf, green space generally, the river or birds were the most frequent symbols mentioned. Of these the golf course took on a special importance due to its location at the entry to the Island. In the words of one woman:

"the golf course - that's how I know I'm on the Island. When you drive to the Island it's the first major thing that hits you."

These natural elements, together with a well planned environment, contributed to the overall appreciation of the quality of life available on the Island. This facet was emphasised by a mother of three young children who made frequent use of the pedestrian pathways to access community facilities and nature. For her, the

primary image of the Island was the "peace, freedom and security for children".

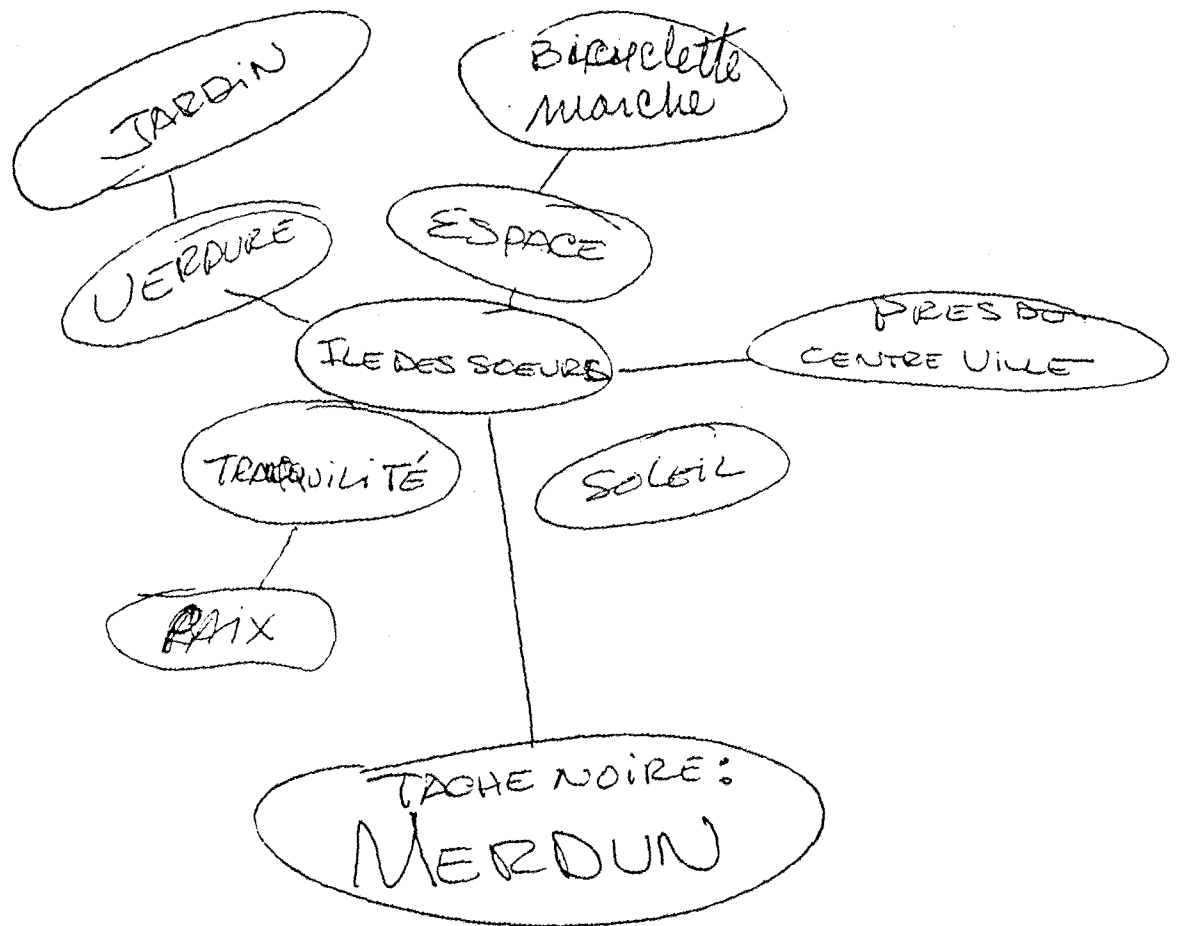
The image clusters revealed a broader set of Island characteristics. Here it is evident that the natural features of the Island are valued for the tranquility which they offer so close to the city center. The possibility of walking along natural trails to visit marsh areas and see wildlife are highly valued as are the more organized recreational facilities such as swimming and tennis. Social aspects of the community are also an important element in these clusters with respondents emphasizing the community spirit and presence of friends and acquaintances. For one man, who grew up along the Richileau River, the different features of the Island are primarily reminders of pleasant times such as vacations or socializing with family and friends - the river, for instance is symbolic of access to the South Shore where family and friends still live. Still all is not bucolic as evidenced by the references to the City of Verdun administration in several of these diagrams. (Exhibit 6.1.2a)

The cognitive maps of the Island were also interesting. Most of these emphasized the fact that the community is on an island by drawing a firm line around the perimeter. Only one person drew in the shore of "mainland" Verdun and several omitted the bridge. Predictably the Island features indicated focussed on natural elements and recreational activities. The forest and golf course were the most frequent elements drawn. Many also included the nature trails, pools, tennis courts, and community facilities. (Exhibit 6.1.2b)

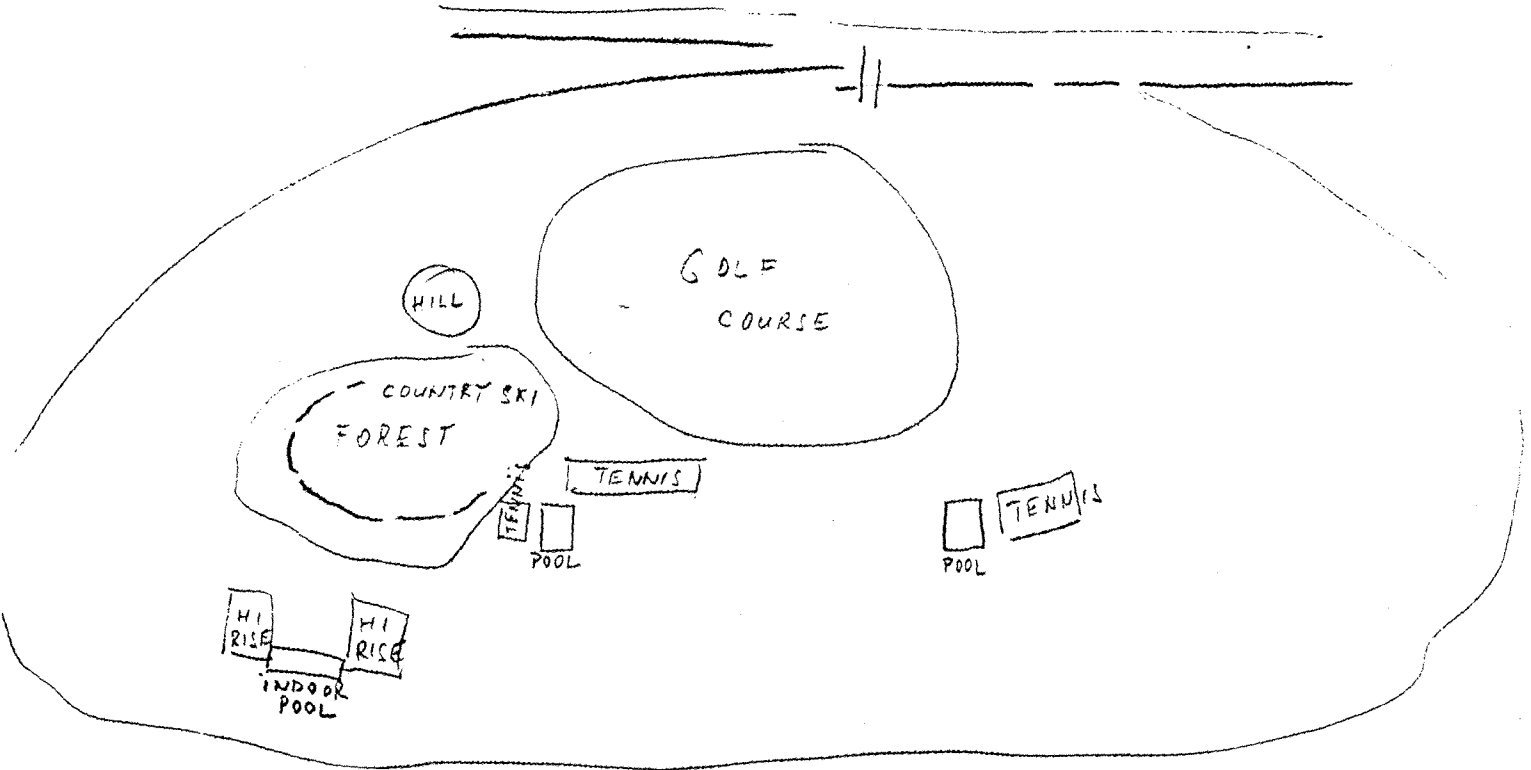
6.1.3 Immediate Outdoor Space

The respondents interviewed lived in two different townhouse settings. Some had a small amount of space in the front, and in the back a deck or patio plus a small backyard which was exclusively available for members of the household and generally fenced in. Others lived in an area where residents sought to duplicate some of the features of MSI's phase I & II development. Here private decks or patios were available to residents which overlooked a semi-public area which is used by all residents in the housing block. As discussed in Chapter 4, however, this latter arrangement, is informal and survives rather precariously as it depends on the mutual agreement of the neighbours to leave the yards open.

All respondents focussed most of the discussion of their immediate outdoor environment on their patio or deck. Many felt that the original patios and/or decks were too small and some had enlarged them to accommodate a minimum of four chairs and a table so that they could eat and entertain guests outside. The micro-climate and privacy of these amenities was particularly important and some have considered erecting trellises and hedges to promote both aesthetics and privacy. A few mentioned that it would be agreeable to enclose all or part of the patio with a sunroom to permit greater access to nature throughout the year.



Bonaventure



In all cases these facilities were the most frequently and intensely used outdoor space. Typical uses were to relax, read, sunbath, eat, entertain friends, and supervise children in the yard.

While in most cases a satisfactory level of visual privacy had been obtained those who had lived in high rise buildings with panoramic views felt that the view from the private space was restricted. The availability of extensive public areas in the MSI development with excellent vantage points, such as Vancouver Park and the area around 201 Corot were compensating factors. Mies Van de Rohe's unique design of this building is appreciated. As one respondent put it ...

"the apartment building across the street is up off the ground so I can see the park".

While most of the townhouse owners in this neighbourhood do not have a view of the river they consider the land surrounding 201 Corot to be a public park - somewhat to the annoyance of residents of this high-rise apartment building.

A few respondents were very dissatisfied with the lack of both visual and audio privacy - one of whom had just sold her house to move to Les Verrières, a condominium project on the Island. While most felt that visual privacy could be assured with some adjustment, audio privacy was another matter as it depended on the cooperation of neighbours. Several respondents complained of loud voices and one person, who had moved to a townhouse primarily to provide a better environment for her children found that she was not free to let them play freely due to the noise which they would generate. An "L" shaped building or staggered units may help ensure audio privacy in the most critical areas near the housing unit.

One respondent felt that the lack of visual privacy was to some extent an advantage as it made her feel more secure that her neighbours could see any intruders yet knew when to leave her alone:

"it is more secure for me that my neighbour behind can see into the unit because if someone was in here when I'm not she knows something is wrong. At night I pull the drapes and shutters for privacy. It would be less secure for me to put up a 6' fence."

This view was echoed by others who stressed the security of knowing all the neighbours.

The major controversy among townhouse owners centered on the arrangement of the backyard. Many lived in an area where the majority of residents had tried to maintain a communal space by common agreement. These respondents were more or less evenly divided about the relative merits of this arrangement. While

some would like to erect fences or hedges to ensure each household stays on their own land others liked the open area for its aesthetic quality, social aspects and the possibility of playing soccer occasionally. These different attitudes are illustrated by two diagrams. The first (Exhibit 6.1.3a) emphasizes the distinction between land considered private and semi-private space by the use solid lines for the former while the actual property line which protrudes far into a communal space is lightly sketched. In contrast two neighbours placed (Exhibit 6.1.3b) the emphasis on their full property.

The conflict between these two attitudes has resulted in active protest against another neighbour who erected a ...

"damm frost fence although all the neighbours asked him not to - with the result that no one will talk to him. One of the neighbours cut huge holes in it but he repaired it instead of taking it down."

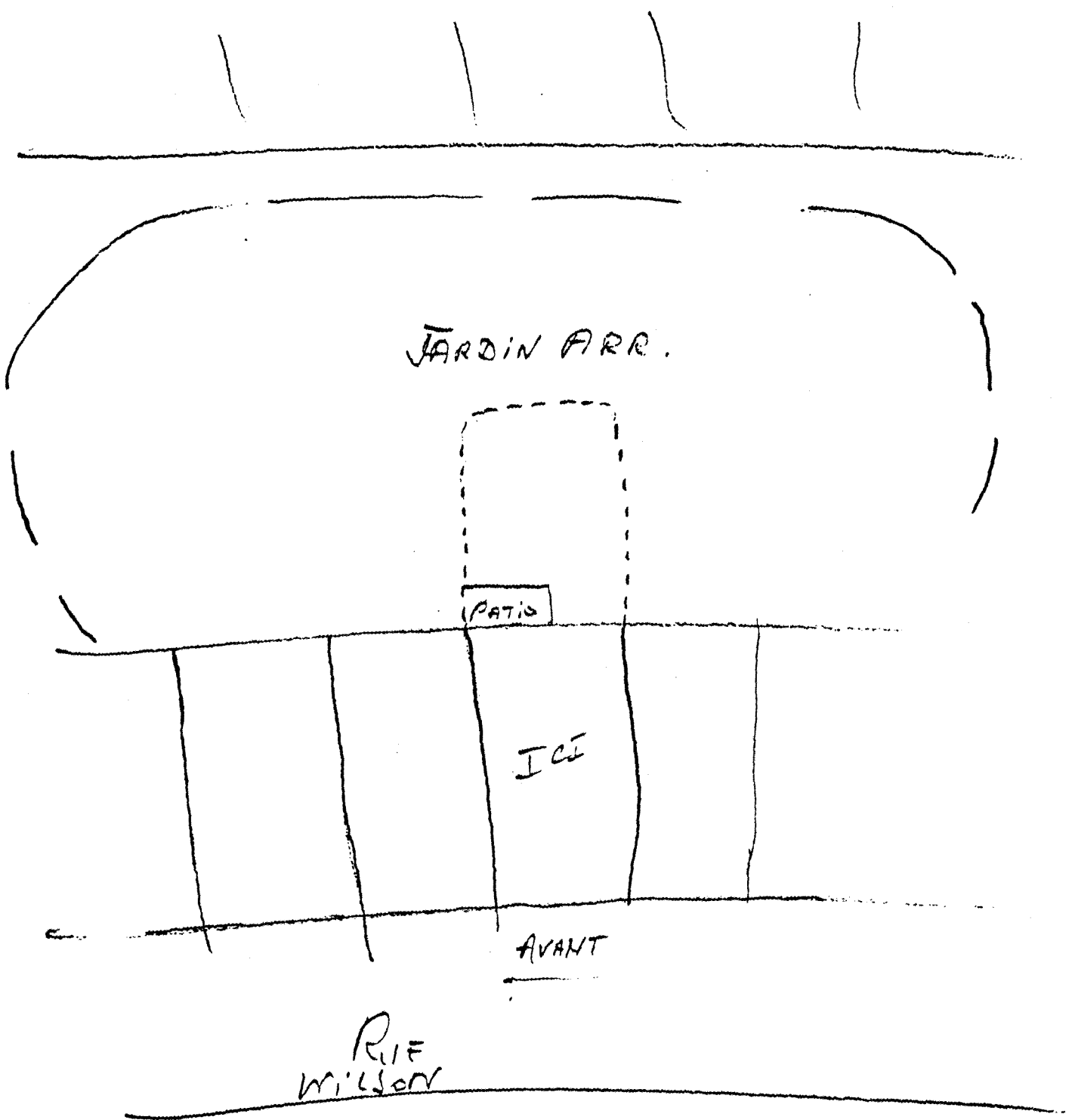
Opinions were also divided, however, about the desirability of fenced backyards among those in this situation. Several of the respondents in these households complained about the size of the yard - which was only big enough to serve as a "toilet for the dog". The impossibility of erecting a suitable badminton net, or swimming pool or active play structure for older children virtually restricted outdoor use to sitting on the deck or patio.

Still the possibility of exercising absolute control over how an outdoor area is used can be especially attractive. One of the respondents with a small yard had lived in an MSI townhouse bordering on a common courtyard for many years. She greatly valued the view and access to the pedestrian pathway in that setting but was less delighted with the "fat old men in bermuda shorts with hairy legs walking across the backyard". At least the new space was hers to control.

One woman, a mother of three young children, thoroughly enjoyed her private fenced backyard. Her illustration, (Exhibit 6.1.3c) which greatly exaggerates the size of the yard, clearly indicates its importance as a protected environment.

6.1.4 Friends and Acquaintances

Most respondents indicated that they had about 4 to 7 friends and a greatly varied number of acquaintances on the Island. These friends and acquaintances tended to be scattered throughout the older area of the Island where most respondents had lived. The degree of support which respondents offered for the concept of communal space in the newer townhouse area was not associated with the number of friends and acquaintances in that area.



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(le) moi

1/ PATIO

2/ JARDIN ARR.

3/ AVANT (Le feu)

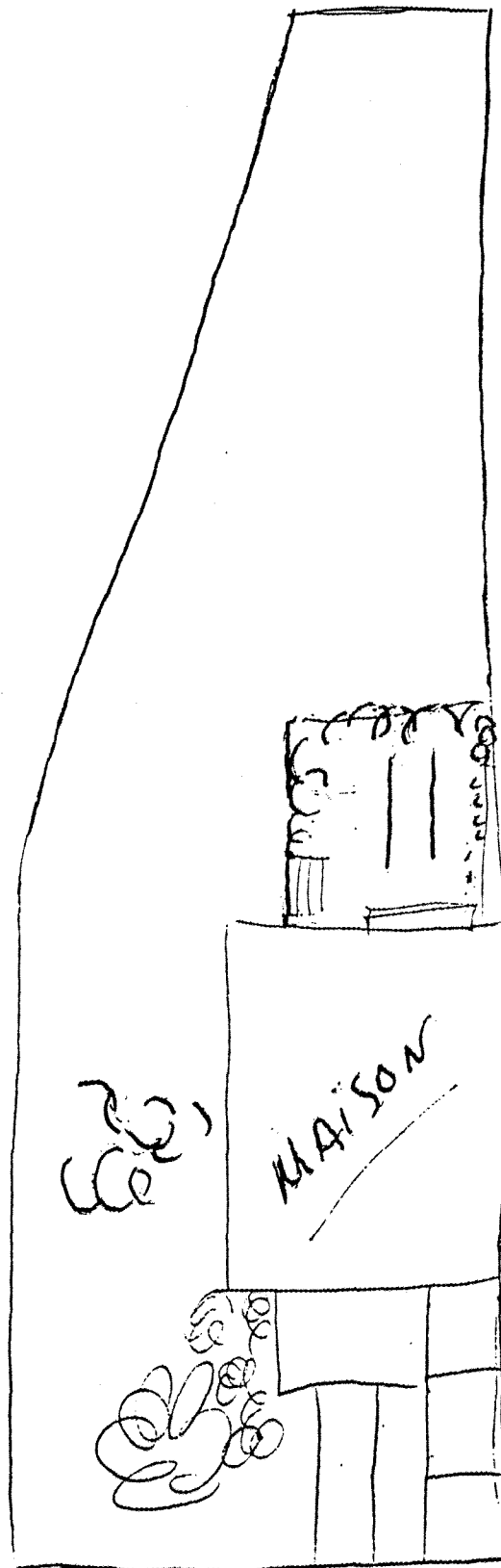


Exhibit 6.1.3b

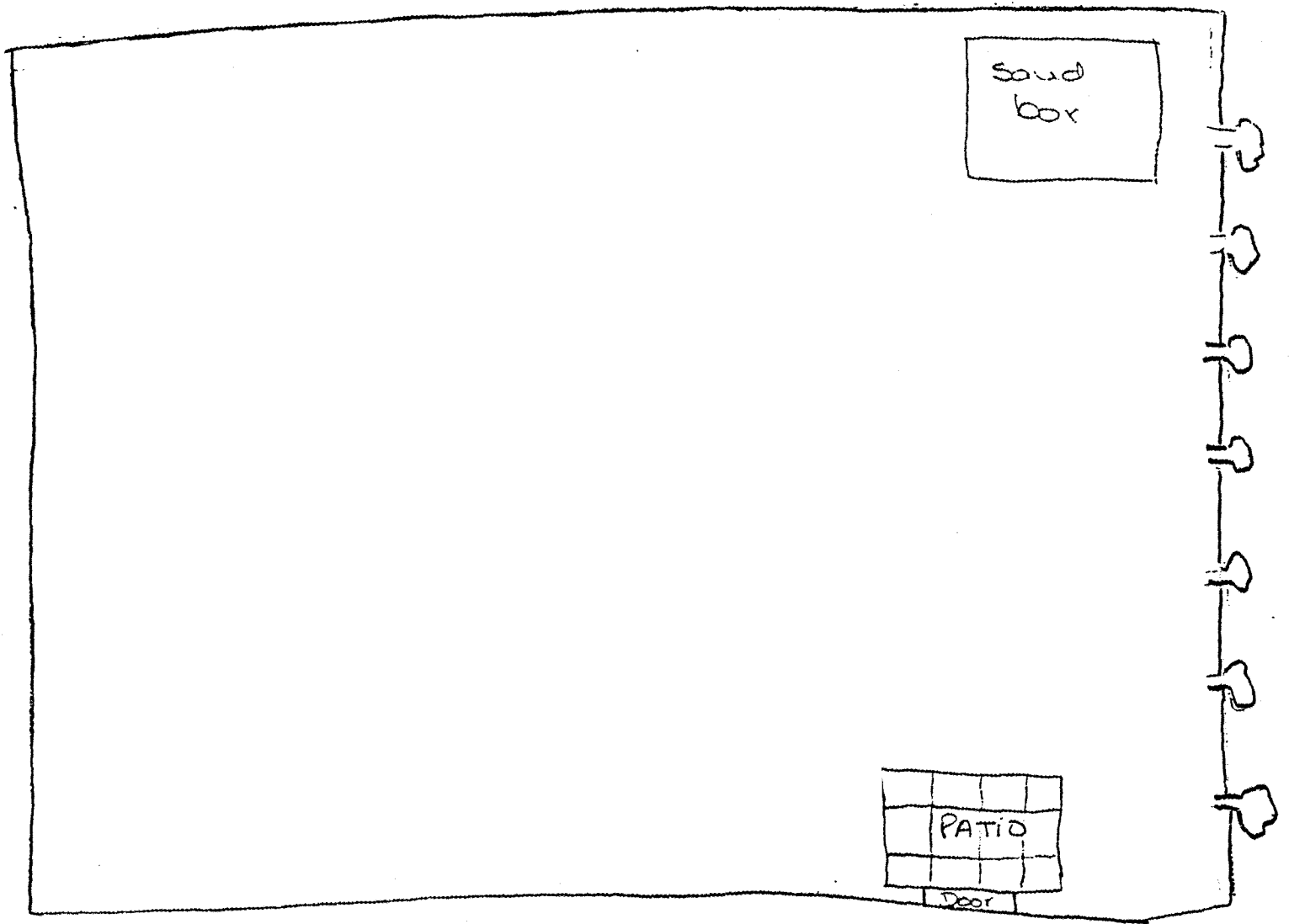


Exhibit 6.1.3c

6.1.5 Places and Routes

All but one of the respondents reported that they frequently visited the Elgar community center and shopping center. The one exception had limited mobility. Most were also frequent visitors to the swimming pools, tennis courts and woods. Only three had explored the landfill area while none had visited the north end of the Island beyond the Champlain Bridge. Trips to the community center and natural areas were most frequently completed on foot or bike and tended to make extensive use of the pathway system. Cars were used to access the shopping center and indoor tennis courts. (Exhibit 6.1.5)

6.1.6 Development Issues

There was a great unanimity among respondents concerning development issues. All felt that the earlier MSI development, especially in Phases I & II had created a high quality residential environment which was not being continued due to an apparent lack of planning and the preoccupation of Verdun administration with tax revenues. All felt that much more attention should be paid to the opinions of residents and that at a minimum an architectural and planning review board appointed by residents and city administration should make decisions.

"I'm not against development - It's just that there is no town planning. I would like to have the golf course and hope the forest will be kept and just develop around the golf course with the original format with paths and parks."

The sharp socio-economic differences between Island residents and those of "mainland" Verdun was reflected in many of the comments. It was felt that there were sufficient differences that it was unlikely the Verdun council would ever really understand their priorities. Consequently, most favoured the formation of an independent municipality or annexation by Montreal.

All would prefer that the woods and golf remain much as they are - but there was a realization that the golf issue had been lost and that development would inevitably take place. The loss of the golf debate greatly influenced attitudes toward the effectiveness of residents to influence development. Most felt there was little or no influence - ignoring many successes in the past. All 8 of the 10 respondents who were members of NIRA indicated that the association represented their views "very well". The association won wide praise from both members and non-members for "trying very hard" but with little effect.

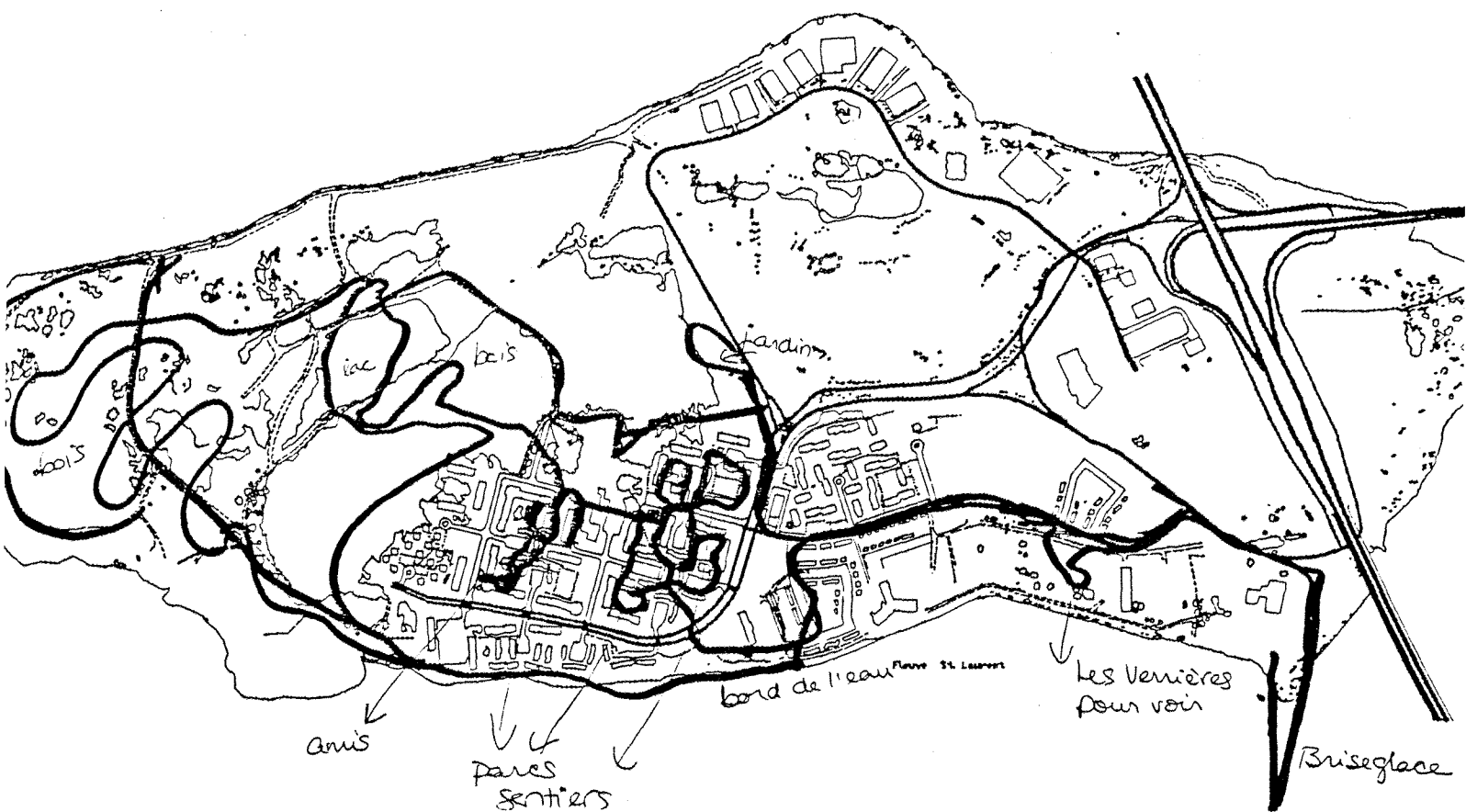


Exhibit 6.1.5

6.2 Townhouse Tenants

6.2.1 Respondent Characteristics

The townhouse tenants live in one of the most interesting, experimental housing environments in Quebec. Located on deadend streets with formal entrances in the front and informal access, private patios, courtyards and pedestrian pathways in the back of the housing unit, they experience a mix of direct outdoor access, privacy and public exposure. At the same time, their personal control over the environment is very limited as Metropolitan Structures is responsible for maintenance and attempts to ensure a certain degree of uniformity in the exterior space. Many enjoy having MSI take care of the land and are perfectly willing to trade off personal control for this convenience. Others consider themselves to be transient (even though they may have been there for many years) or powerless to effect change. Some do modify the environment to better suit their needs inspite of the perception that this would not be favourably regarded.

The respondents interviewed in rented townhouses were varied. Fairly sharp differences in sensitivity to the way interpersonal relations were enacted were evident between people (in this case exclusively women) with children who stayed at home during the day and others who worked elsewhere. Generally those who worked elsewhere were satisfied with the degree of privacy afforded and greatly enjoyed the openness and access to a pedestrian system. For these people the environment was relaxing, offered many recreational opportunities, and encouraged excellent relations with neighbours.

Those staying home with children greatly valued the possibility of sitting on their patio and watching the children play nearby or in the courtyard.

The townhouse tenants have a lot in common with the townhouse owners although they are less likely to be young families. Nine had children living with them. One of which was in a single family household. Five of the ten respondents had lived in at least one other rental unit on the Island previously. Most were long term residents with 7 having lived on the Island for more than 4 years.

All but one respondent indicated that they identified with a childhood home. For most, these were large single family homes surrounded by plenty of green space. While one respondent grew up in a "petit - sombre appartement" in Paris his family had a country house which was regularly used on weekends. All were predisposed to value suburban or country-style living - something which Nuns' Island had to offer in addition to a certain level of sophistication and the benefits of proximity to a big city.

6.2.2 Perception of the Island

The characteristics of the childhood homes were reflected in the landmarks and symbols identified for the Island by all respondents. In the words of one respondent:

"Nuns' Island is very green and countrifying.
Its' very relaxing and civilized at the same
time."

These sentiments were echoed by all other respondents. The forest and green spaces generally were the most frequently mentioned symbols or landmarks.

The cognitive maps of the Island also reflected these values. The forest, golf course, river and some community activities were stressed on these maps which as with townhouse owners in many cases did not show any exit from the Island. For one respondent, however, who had been on the Island for only three months and had a cottage available for the weekend the easy access to downtown was a predominate feature indicated in her drawing. (Exhibit 6.2.2a)

These concerns, in addition to concerns with the social characteristics of the neighbourhood, and amenities for children were reflected in the cluster diagrams. And one respondent added in her substantial concern with development issues. (Exhibit 6.2.2b)

6.2.3 Immediate Outdoor Space

Respondents lived in basically two different townhouse settings. One group was located on deadend streets with a front balcony and lived in Radburn style townhouse - apartment clusters and the second group lived along the river. The riverside units overlooked a more exclusive semi-public area as the public pathway in this area is below the dike and more or less out of sight. In both cases, however, residents have exclusive rights only to their patios and generally have very limited rights to modify even that environment as MSI attempts to maintain a certain uniformity in the exterior space.

The activities engaged in on the patios were very similar to those of the townhouse owners - eating, entertaining, reading, sunbathing and supervising children. Again these spaces were of primary importance to residents. The space should be large enough to accommodate a table and 4 to 6 chairs, visually private and aesthetically pleasing.

Most felt that these criteria were reasonably well met with the arrangement of space and the use of dividers to separate neighbours. This acceptance was, in part, due to an appreciation of the overall benefits of the design of Nuns' Island. All appreciated the possibility of overlooking a semi-public

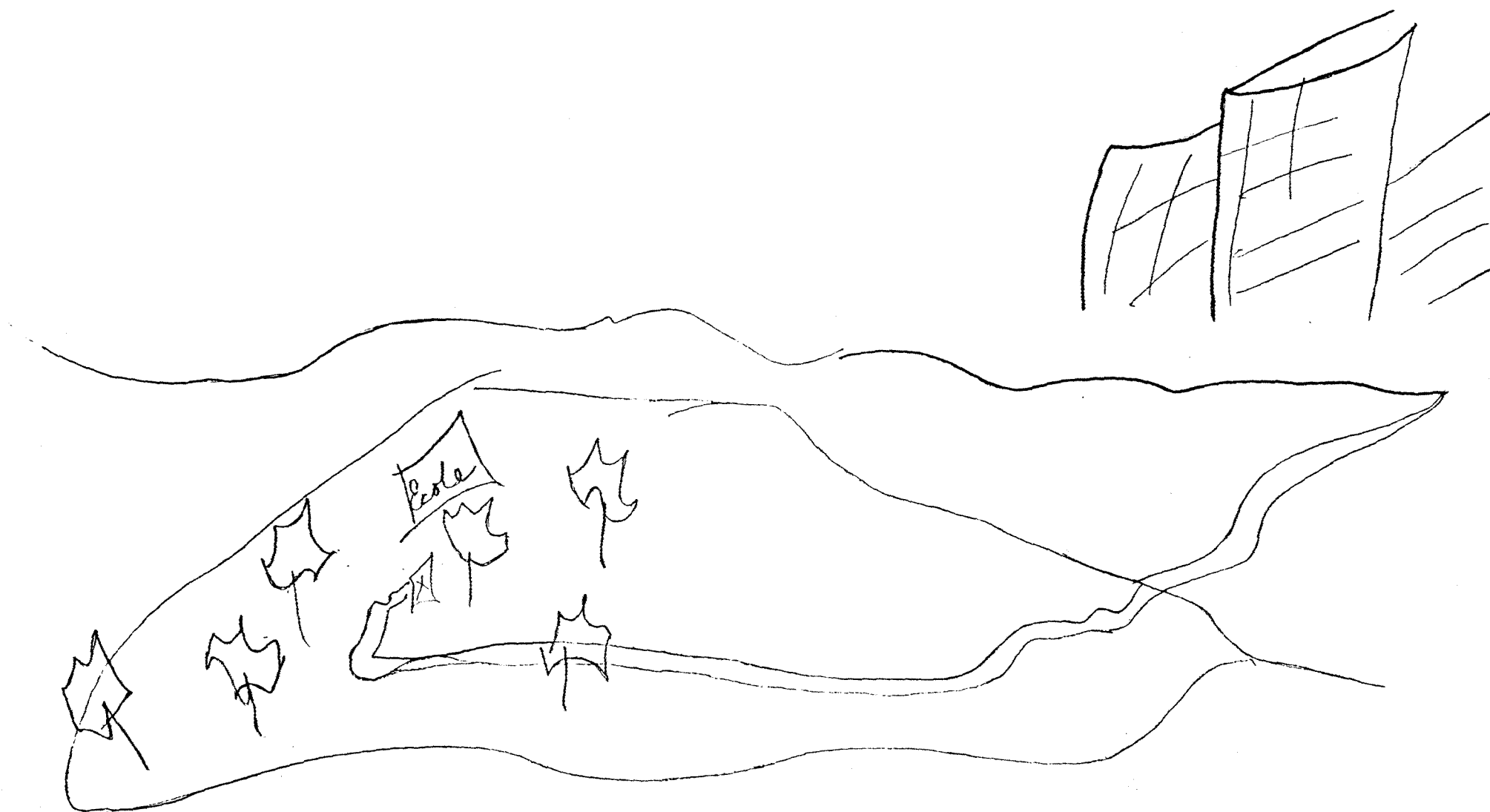


Exhibit 6.2.2a

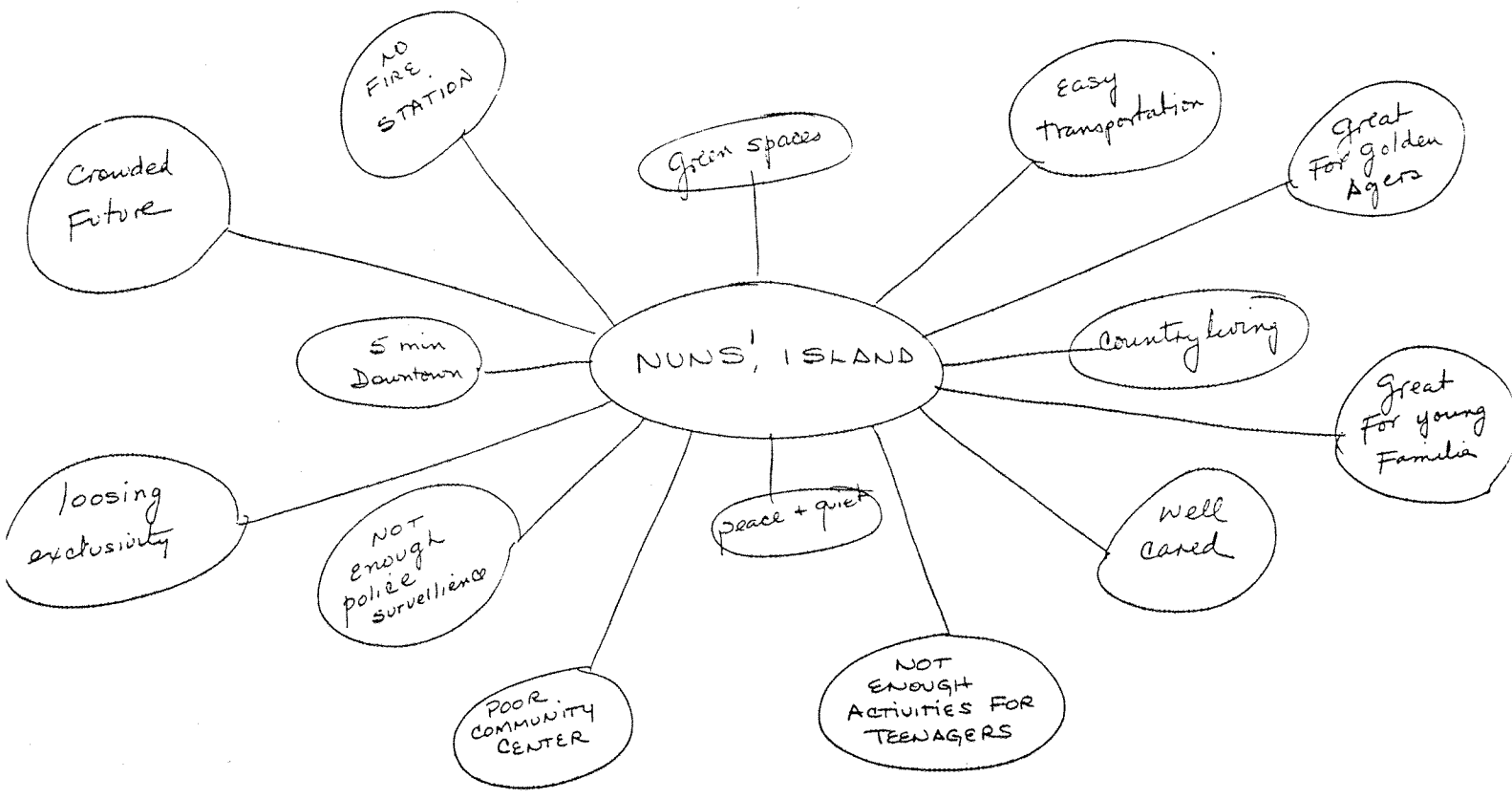


Exhibit 6.2.2b

courtyard or open space which was connected to the pedestrian pathway system. (Exhibit 6.2.3a) As one woman commented:

"I think for what Nuns' Island is everything it's o.k. You don't come to live here and have your own backyard. You expect to have people walking by ... but it doesn't disturb me."

Some respondents were, nonetheless, very sensitive to the extent to which other residents walked across "their" territory. In large measure this conflict was due to differing conceptions of the boundary between public and semi-public space. For example one respondent felt her exclusive right of use should extend to a tree some distance from her patio. (Exhibit 6.2.3b) She was considering design option such as planting flowers so people would be more likely to feel that the space was private and not pass through. The clear separation of private and semi-public areas is less a problem in the courtyard sectors where a slight embankment down from the patio toward the pedestrian pathway serves as a reasonably effective boundary.

In spite of the advantages of overlooking a semi-public area many residents felt that it was necessary to make some adaptations to secure visual privacy. Many wished that their hedges were higher and better maintained. One respondent commented that it was necessary to have opaque drapes to ensure visual privacy within the townhouse unit - a consideration which was probably common for all. One woman stated that she did not like to go out during the weekend when there were generally a fairly large number of people around.

Physical design itself would not be sufficient to ensure an adequate level of privacy for these residents. In fact an elaborate social system was in effect. Access via the patio door was used only during the daytime in fair weather. In the evening and in the winter people would tend to come to the front door. Privacy at meal times was respected by neighbours so families eating outside were not usually disturbed. Children, however, were an exception to this rule and many are free to go from patio to patio. Particular cues such as chair orientation, or averting of eyes are used to signal that one doesn't wish to be disturbed. In general these measures are effective.

Audio privacy, however, is much more difficult to obtain. Several respondents commented that they did not feel free to discuss personal issues outside or be as boisterous as they might like on occasion as all of the neighbours would hear. The discussion of private family matters, therefore, had to be conducted inside the house. Even those who feel more comfortable speaking out occasionally feel on stage:

"je ne m'empêche pas de rien faire. Des fois ca me dérange qu'on regarde tout ce que je fais surtout quand je chicane les enfants,

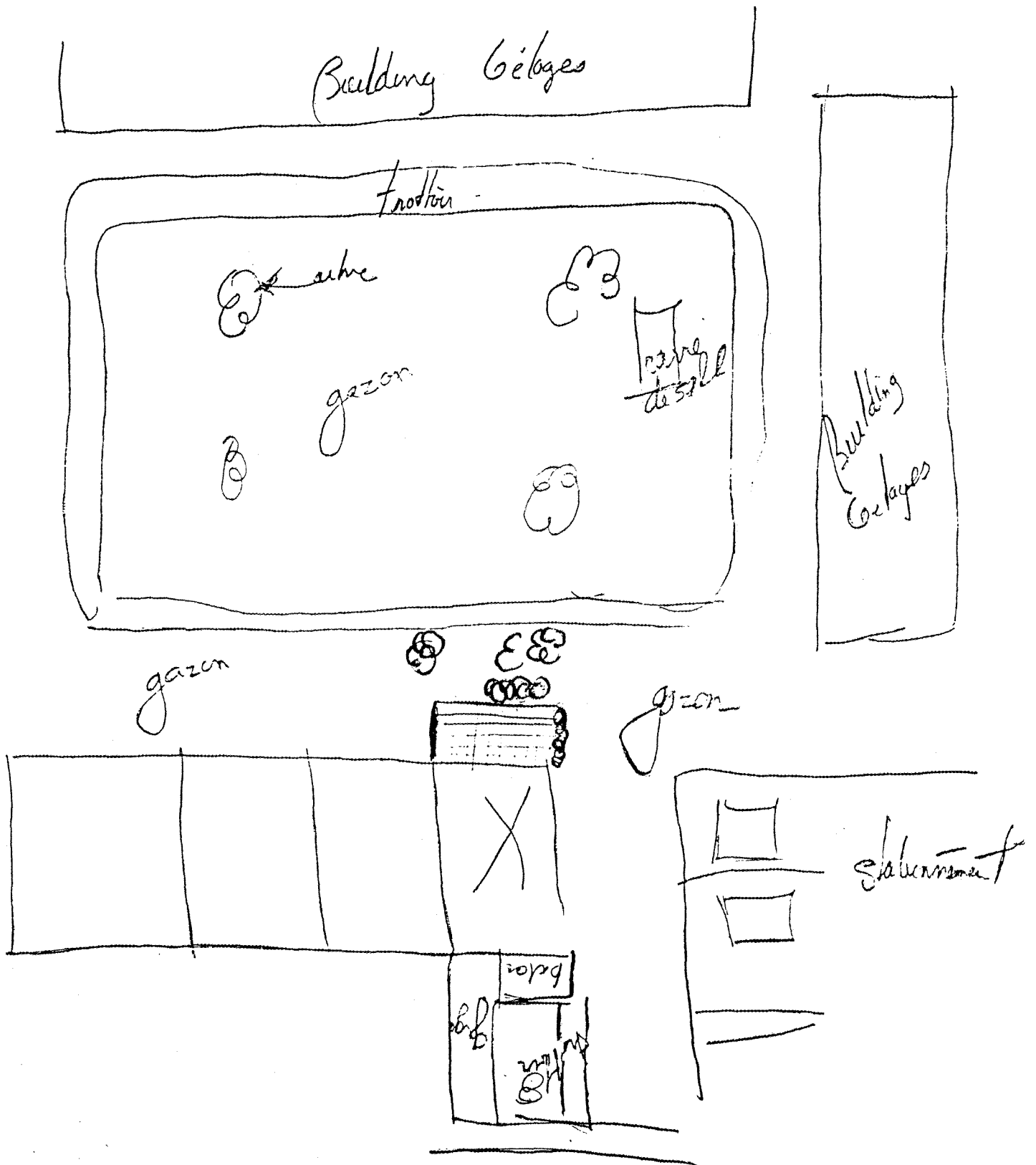


Exhibit 6.2.3a

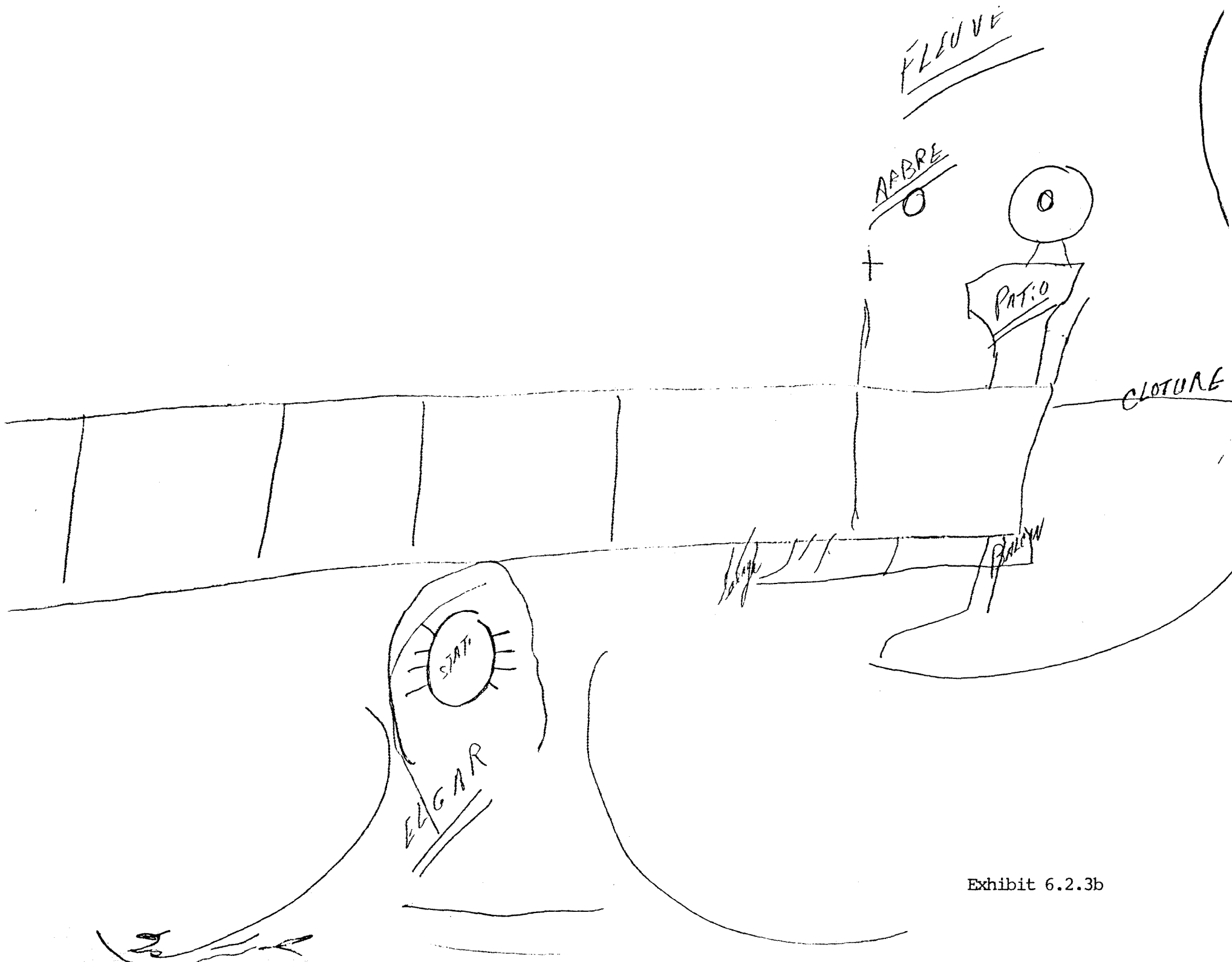


Exhibit 6.2.3b

mais je sais que tout ce que je fais est correct."

Generally the mix between low-rise apartment and townhouse tenants around a courtyard was not commented on. One woman, however, did mention that ...

"Les voisins des maisons de ville sont très gentils mais les voisins des deux blocs d'appartements n'aiment pas les enfants. Ils veulent la tranquillité absolue, ils font des remarques à l'occasion au sujet des trébuchettes des enfants ... c'est tout à fait une autre catégorie de personnes."

The presence of the courtyards themselves was highly valued as a visual amenity although they were rarely used except by children. Opinions were mixed on the dense trees in some of the courtyards. Some felt that they provided an agreeable shaded atmosphere while others longed for more sun. The most frequent complaint with these areas, however, concerned dog feces and broken glass which were not picked up.

Most townhouse tenants had done something to personalize their outdoor space. For many this was simply planting flowers and maintaining the green space immediately around their unit. Others had taken the initiative to add patio stones, carpet the patio, trim the trees or modify the fence. Several stated that they would like to convert the patio to a screened or glassed in porch to extend its usefulness. One respondent commented that she much preferred to be active outside rather than just sit and would like to have a garden and clothes line.

Many were unhappy with the maintenance provided by MSI. Complaints about the care for the hedges, lawns, splits in the concrete of sidewalks and steps were common.

6.2.4 Friends and Acquaintances

The number of friends and acquaintances varied greatly with most reporting 4 to 10 of each. Only one half of the respondents had a cluster of 2 or more friends or acquaintances in the immediate area of their townhouse. This suggests that a certain anonymity is maintained by many of the townhouse residents as a means of protecting their privacy. It is easier to control interactions with people who you do not know by name and with whom an interactive pattern has not been established. The vast majority of friends and acquaintances were located within the MSI phase I and II area.

6.2.5 Places and Routes

The places visited most frequently were the community and shopping centers although most also included the forest, park and certain recreational facilities such as the tennis courts and

swimming pools. About one half of the respondents regularly made extensive excursions through the forest and over the landfill area - often as part of a daily walk. Several individuals complained that the new shopping center was less conveniently located than the community center. Almost all of the trips to the shopping center and indoor tennis courts were made by car - a fact which is indicative of the increasingly suburban nature of the Island environment.

All respondents were well aware of the pedestrian pathways and used at least some segment of the system regularly.

6.2.6 Development Issues

All of the respondents deplored the type of development which was taking place. In spite of the occasional complaint noted above about their housing environment, all felt that Phases I and II should serve as a model for further development with pathways, courtyards, harmony between buildings and plenty of attention to the quality of the green space. All felt that the woods should be preserved as it is with only needed maintenance. Many, had reluctantly concluded that the golf course would be developed but remained very concerned about the quality of the development which would occur. The perception that the City administration was only interested in tax revenues was prevalent.

"I don't like the new development at all .. it's in total disregard of what the residents want .. it's a blatant political move on the part of Verdun to further use the Island as a milk cow and to pander the beastially greed of the developers to the total disregard of the environment, the initial nature of the original development and the harmony of buildings"

"ca detone, ca manque d'urbanisme, c'est trop heteroclitte, disparate en hauteur, oops une tour, oops un bloc oops des townhouses ca manque d'unite"

"I feel the design of the houses is ugly, not enough green space between them. It's like they are glued together. It's starting to be 3rd class - like the welfare housing near Atwater."

Finally one respondent lamented that the social character of the Island was also changing with the arrival of the condominiums. Young families were becoming less prevalent.

"Maintenant dans les condos ce sont des familles avec des adolescents et ils commencent à me fatiguer. Ce sont souvent des enfants de riches, ils bousculent les tout-

petits, sacrent après tout le monde, sont arrogants. Les gens n'ont plus de bébés sur l'île les jeunes familles francophones sont parties sur la rive sud. Il y a une nouvelle tendance. Je suis une des dernières à promener mon carrosse."

6.3 Low Rise Tenants

6.3.1 Respondent Characteristics

The low-rise apartments are for many a port of entry to the Island. Thus in contrast to the owners and townhouse tenants only 2 of the 12 respondents living in low-rise apartments had lived elsewhere on the Island previously. For many this was seen as a transitional space where it was possible to save before starting a family and buying a home; rest up between marriages; or as an agreeable place for a single lifestyle. Others, of course had no particular plans and a certain number intended to stay for a substantial length of time. As the low rise apartments in Phases I and II, are near the pathways and courtyards, have pleasing views, and are of excellent quality with large rooms in soundproof buildings, they meet the needs of a permanent residence for many people.

Of the respondents who completed the detailed survey 5 were living alone, 1 was in a single parent household and 2 were elderly. The number of years of residency ranged from 1 to 10 with a median of 3.

6.3.2 Perception of the Island

While the majority of the cognitive maps of the Island stressed the same features as the maps of other groups - ie the forest, golf course, river and recreational facilities - they tended to be much less elaborate. Four of the 12 indicated only the forest and golf course within a circular shape, omitting any roads, houses, access or community facilities. (Exhibit 6.3.2a) Three others included some parks and services yet again omitted all houses. One drew a very detailed yet localized map of the area around her home.

All but one of the respondents had lived in single family homes when they were children. The majority (6) of these homes were located in the country or a small town in Canada while 2 were in a urban residential area and 3 from other countries. As with the respondents from other housing groups the image of the Island was typically related to green spaces or tranquility. For one man the Island was the "lungs" of the city. However, the proximity to the city center and a cosmopolitan life style were also important. As one woman explained:

"je retourne dans un milieu qui ressemble à mon enfance mais avec la ville pas loin; comme ça je peux combiner mes 2 vies."

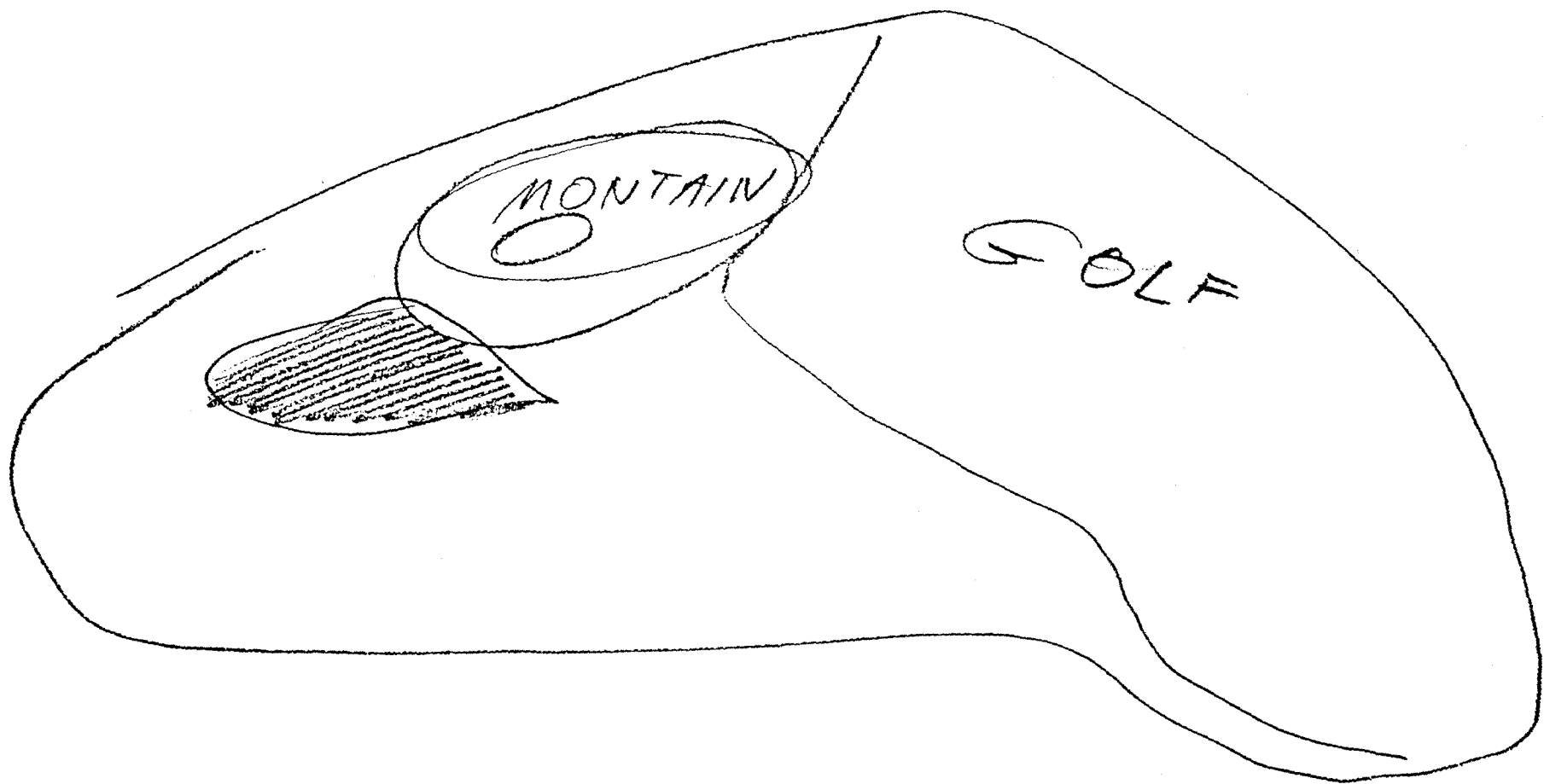


Exhibit 6.3.2a

The cluster diagrams tended to emphasis the natural qualities of the Island, recreational opportunities, proximity to work and development issues. Interestingly only three noted anything to do with the social life of the family or community and only one of these specifically referred to children. This is in direct contrast to townhouse residents - tenants or owners. (Exhibit 6.3.2b)

6.3.3 Immediate Outdoor Space

The respondents had basically three different types of outdoor space. Some lived on the ground floor of their building and had a private patio sheltered from public view by a hedge as well as a space in front of their unit which was generally treated as private. A second group had small balconies with an iron bar railing and the third substantial balconies which typically ran the length of the apartment unit with concrete floors and sides. In addition all had ready access to semi-public and public space around their building.

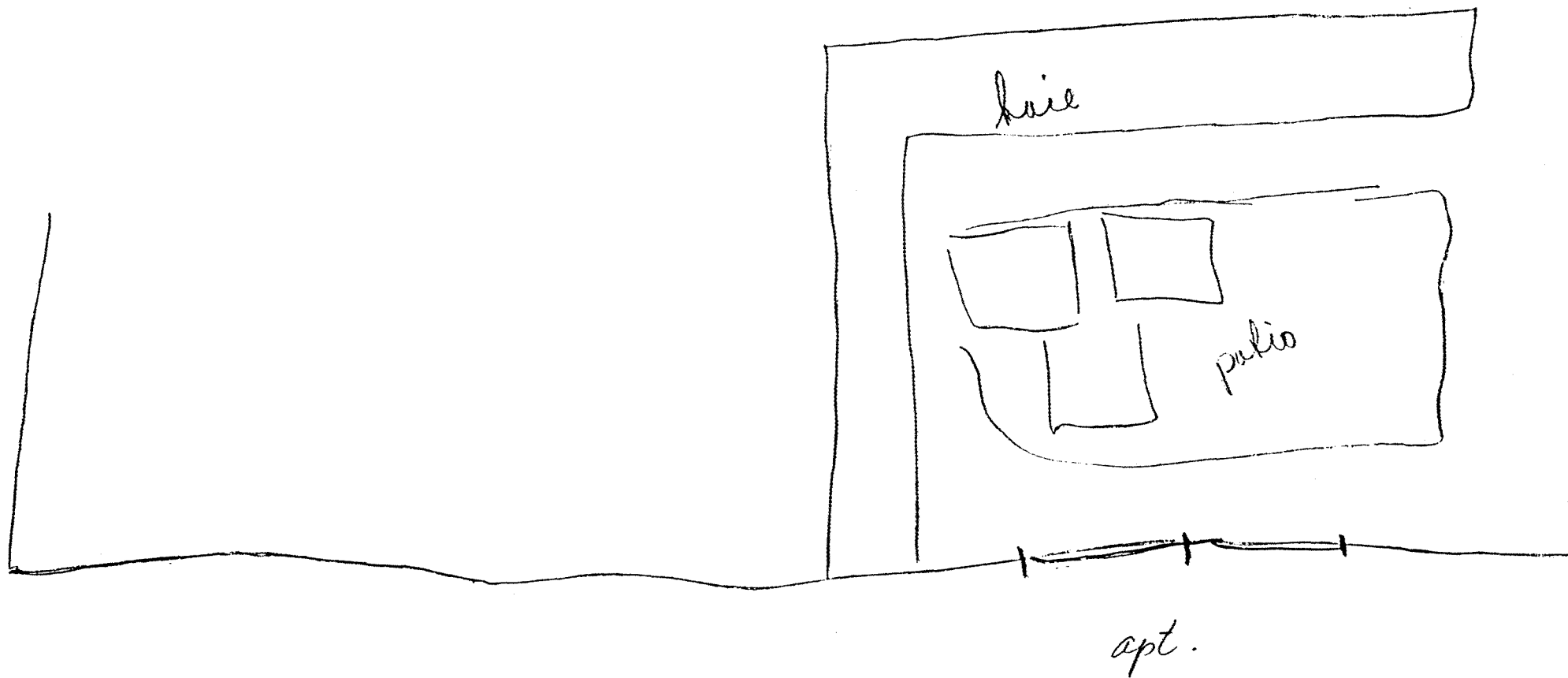
Those with patios were generally very satisfied as it made them feel that they were living more in a house than an apartment. The patios were used daily to sun, entertain, eat, read and generally relax. Several would have liked to be able to establish a garden next to the patio.

Nonetheless, they experienced similar dilemmas to the townhouse tenants with respect to privacy and sense of territoriality. While hedges were appreciated because of the seclusion they provided - the fact that they were located at the edge of a rather small patio left an undefined space between the hedges and the public pathway. Residents would have liked to extend their territory closer to the walk to include what some referred to as their "yard".

Privacy was an issue as neighbours had several vantage points from which to see the space - including the balconies overhead and in neighbouring apartments. One respondent felt uncomfortable sunning in a swim suit because a particular neighbour would invariably watch her. There was as well concern with security due to the ease of ground level access and the proximity of the public path. At least one respondent kept a dog primarily for this reason.

The adjacent semi-public areas were valued as a visual amenity and buffer. They were used primarily when children were visiting or for parties. Noise was occasionally a problem but this was tolerated because these areas were used almost exclusively by those in adjacent buildings.

Sketches of the outdoor areas clearly outlined the patios and hedges but provided little details about how the space was used. (Exhibit 6.3.3a)



Those with balconies had a variety of impressions. Some felt that there was insufficient privacy either due to a first floor location or the use of iron railings. Others remarked that the solid concrete sides on their balconies made it impossible to see the ground while sitting down. Generally, however, the balconies were very appreciated as a private outdoor space where one could get a bit of fresh air, relax, entertain friends, eat and perhaps, most of all, people watch. Views of residents coming or going, the river, forest or the city were very important. Most respondents had not made any changes to their balcony although a few had flower boxes and had carpeted the concrete floor. Several respondents commented that other people did not use their balconies often and they therefore felt both visual and audio privacy.

Two respondents were especially fond of their balconies. In both cases the size, view and seclusion of this outdoor space was of particular importance. One felt that it was like a private interior court and that ...

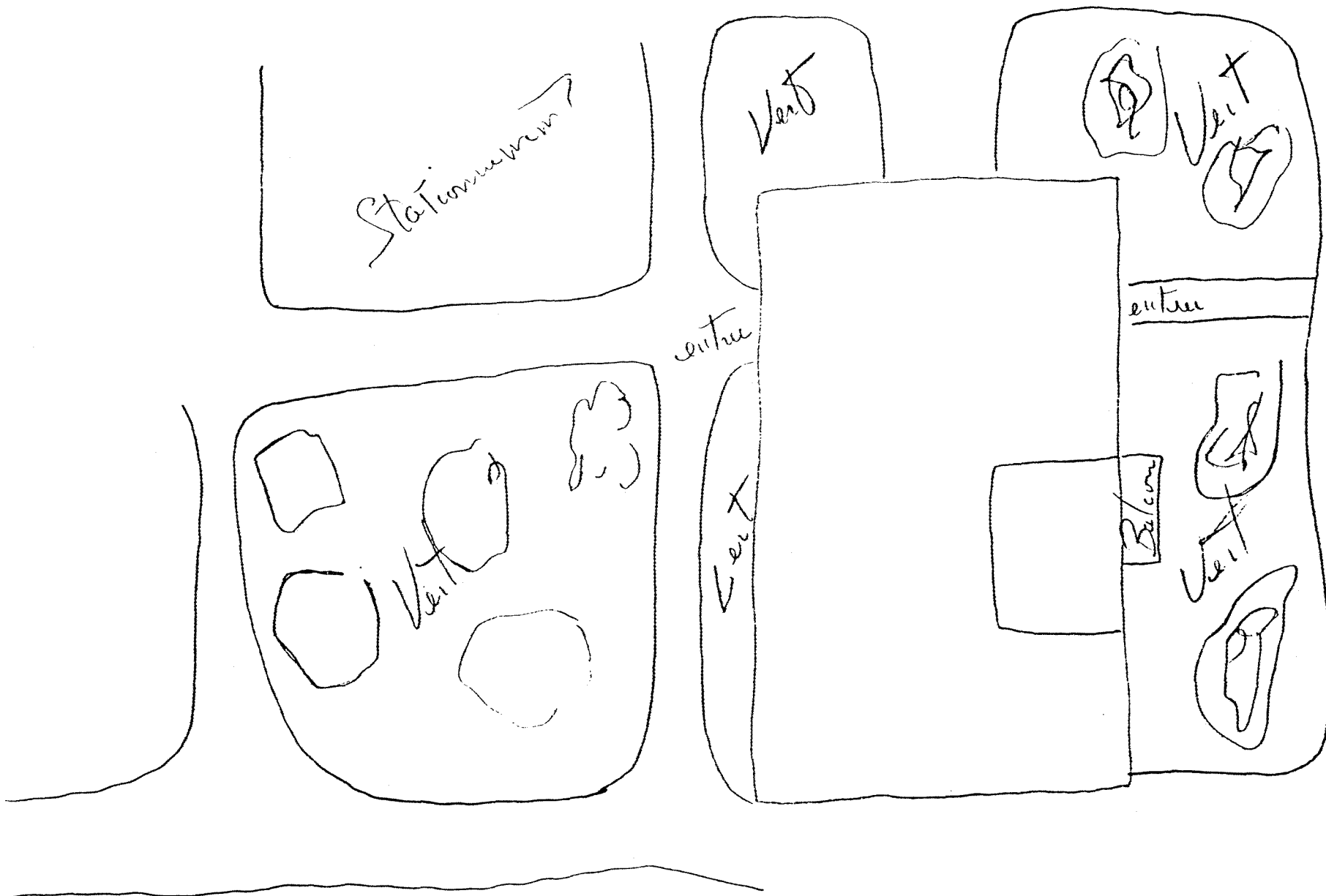
"c'est pas comme dans les banlieues avec tous les voisins qui vous regardent tout le temps, qui veulent savoir des choses, qui 'sniffe'."

Few people had made any modifications to their balconies and only three had ideas about how they would like to change the space. These included making the balcony larger, installing a transparent side to enable one to see below and building a false floor to bring the height of the balcony and the living room floor to the same level.

All respondents appreciated the adjacent semi-public or public space as a visual amenity although in four cases it was seen primarily as a buffer between the apartment building and a roadway and of little use for activities. (Exhibit 6.3.3b) Three respondents did make extensive use of the semi-public space around their building to sunbath, entertain and meet friends. These people appreciated the semi-public quality of the space as only residents of their building were inclined to sit there. Few children were in these areas. One respondent who lived in a more family oriented setting enjoyed watching the activities of children in the court.

6.3.4 Friends and Acquaintances

Most respondents had between 4 and 8 friends and acquaintances. These tended to be scattered throughout the rental area. Only 3 people indicated that they had friends in their apartment building.



6.3.5 Places and Routes

The majority of respondents regularly visited most of the community facilities and the wooded area. Only two, however, explored beyond this range and four limited their activity to the community and shopping areas.

Almost all of the respondents made extensive use of the pathway system. Wooded trails and a walk around the golf course were also often indicated on the maps.

6.3.6 Development Issues

All but one of the respondents were strongly opposed to the type of development which was taking place on the Island. As with the townhouse respondents, the early Phase I & II developments were seen as a model of how things should be.

In general the respondents felt that they were being treated unfairly by the City of Verdun. A strong planning committee composed of residents was the preferred option for development control.

6.4 High-Rise Apartment Tenants

6.4.1 Respondent Characteristics

As noted in the analysis of the telephone survey the high-rise tenants were the most likely group to be living alone. This was the situation for 8 of the 14 respondents interviewed for the detailed survey. Most of these people were between 25 and 45 years of age. They earned a median income of \$45-55,000. As a group they had extensive experience on the Island with a median of 4 years residency although they were most likely to have lived in more than one apartment since first coming to the Island. One respondent who first arrived in 1970 with her parents when she was about fourteen years old offered a number of insights about the physical and social changes in the community since that time.

The respondents offered a variety of landmarks or symbols for the Island. For some including the woman who had lived here as a teenager it was simply "home" - in a tranquil natural setting. Others emphasized the natural aspects of the landscape, the proximity to the city or a combination of the two themes. For one man the essence of the Island was evident in the environment around the "old shopping center and playground" (Elgar Shopping Center) which at one time was the heart of the community.

All but three of the respondents had grown up in single family houses, most of which were located in the country or a small town. These people remember especially the natural setting of the house with substantial lawn, garden and trees. Only three respondents had lived outside Canada when they were young.

6.4.2 Perception of the Island

The "city in the country" theme was very evident in the cluster diagrams of five respondents. These people stressed the proximity to the city, availability of recreational activities and services and the natural environment of the Island. The possibility of peace and security without foregoing a cosmopolitan lifestyle was at the heart of these diagrams. The Island, however, was not seen as a social environment as no mention was made of family, friends or community life in general in these diagrams.

The natural qualities took precedence over the proximity of Montreal for three respondents who emphasized the tranquility and beauty of the Island. Again social facets of the community were not mentioned by this group.

Five respondents included the social aspect of the community along with the concerns of the above groups stressing the presence of a culturally heterogeneous group of talented, interesting people. Some concern about the way the Island was changing appeared in these diagrams although this was the exception rather than the rule.

One man took a very novel interpretation of the cluster diagram exercise and drew his impression of the social-environmental characteristics. It is likely that many would agree with his categories based on the responses to other questions. (Exhibit 6.4.2)

The cognitive maps of the Island tended to stress the fact that the community is on an Island, the presence of the forest and golf course and a few activity centers. Seven respondents did not include any houses or roads in their illustrations. Generally it appeared that these residents had only a vague idea of the location of particular elements.

6.4.3 Immediate Outdoor Space

The respondents lived in housing environments with basically three different approaches to outdoor space. Four were renting units in Les Jardins d'Archipel and had a balcony or terrasse with access to a small fenced in and heavily guarded space around the building in which tennis courts and a community patio were located. The others were all within the MSI development and had direct access to extensive semi-public areas along the river and the pathway system. Three of these respondents, however, did not have any private outdoor space.

The private balconies received mixed reviews. While most liked the view and privacy of their balcony many complained about the wind or lack of sun due to the orientation of the building or obstruction from other balconies or buildings. Both concrete siding and iron railings received negative comments - the former because they obstructed the view while seated and the latter for



failing to provide wind protection. Plexiglass screens were one alternative mentioned but it was also stressed that it should be possible to ensure privacy by moving a partition when desired. Some complained that the building management did not allow them to install wind screens on balconies with railings - in fact that there were "1000 rules" which made any user modifications difficult.

Only six respondents used their balconies daily. These people liked the chance to have a bit of fresh air, see the view of the river or city, entertain friends or sit and read. Several complained that their balcony was not sufficiently large or protected from the wind to allow them to eat outside. No one had made significant modifications to their balcony although a number had added carpeting and a few were growing flowers, herbs and some vegetables. Nude sunbathing was the most frequently mentioned activity which they would like to do but felt uncomfortable doing. This indicates a lack of visual privacy which in many cases would be possible to obtain with minor modifications.

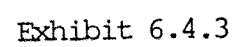
High-rise residents who did not use their balconies regularly tended to complain about the lack of a good view, small size, wind or solar exposure. Some, however, were simply indifferent to their balcony preferring to spend their free time elsewhere. Those without any balcony did not express any strong regrets. They liked the view from their unit and felt that they had ready access to the outdoors as there was plenty of semi-public space around their building.

About 50% of the respondents regularly used the semi-public space around their building. These people tended to live in three MSI apartment blocks which have extensive open areas along the river. As indicated in the behavioural analysis (Chapter 4) much of the activity is highly social as it provides an opportunity to meet friends and on a hot and sunny weekend day and these environments are intensively used. While some respondents had a few complaints about the wind most considered this an environment where it was a pleasure to bring visitors. Several people noted that there were not too many kids and that people were "discrete" and tended to observe one's privacy reading or sunbathing.

A few people felt that occasionally there was simply too much activity in the semi-public space and as one respondent put it ..

"mais souvent je préfère ce que je vois du 11e étage que ce que j'ai ici."

One woman, however, was very involved with the semi-public space around her unit and especially enjoyed the different seasons. For her the local environment was very personal and she had, for example, a favourite tree which turned red in the autumn before the other trees. (Exhibit 6.4.3)



Tenants in Les Jardins d'Archipel were much less pleased with their outside space. They considered it too small and poorly planned to take advantage of their river front location. The only really attractive feature was a terrace located off the indoor pool.

The drawings of the outdoor space tended to be very bleak and included just the bare outlines of buildings and major features such a pool or river. Residents of the de Gaspé towers invariably included both apartment blocks, (indicating that they considered these buildings a unit) the river edge and the woods. No one included any details of their balcony and in many cases did not even indicate where their housing unit was in the diagram.

6.4.4 Friends and Acquaintances

Respondents in this housing group tended to have few friends and acquaintances living on the Island. Seven respondents had less than a total of three friends or acquaintances while only two had more than ten. Most, however, had at least one friend or acquaintance in their building or immediate locality with the others widely scattered. Several commented that they were more socially involved with people affiliated with their work environment.

6.4.5. Places / Routes

All respondents visited the community and shopping facilities regularly and all but three (one of whom was paralyzed) indicated that they took regular jaunts through the woods either walking or on bike. Many women, however, mentioned that they did not go into the wooded area alone. A few made little use of the pathway system as it was considered too intrusive for the people living in the townhouses along the route. Others, however, stressed how agreeable this system was.

6.4.6 Development Issues

Most respondents were not against development per se, as they felt that the addition of more people would result in more and better services. Most, however, were very concerned about the type of development which had recently taken place and drew attention especially to the lack of an overall concept, the jumble of architectural styles and the lack of green space. As with the residents of other housing groups these comments were in direct contrast to respondent views of the earlier MSI development.

While all but one would prefer that the woods and golf course were not developed there was some willingness to consider development of the golf course which respected the natural environment and included the features of the MSI development. A few people commented that while they valued the view of the golf course they did not feel as strongly as other residents about the

"golf issue" because it was not in their immediate area. One respondent thought the Island lacked diversity and that fairly substantial development would create a more exciting environment.

All respondents felt that the residents had little influence over the way the Island was developed with most complaints being directed towards the City of Verdun which is perceived as being only interested in tax revenue. The percentage of respondents who were involved in community affairs was very low with only five respondents being members of NIRA, two of whom were not sufficiently involved to be able to say whether the association represented their interests. The vast majority favoured the establishment of an architectural and planning review committee as it was considered very important to involve professionals in the decision making process.

6.5 Condominium Owners

6.5.1 Respondent Characteristics

The majority of condominium owners lived in households with 2 adults and a total income exceeding 65,000. Among the 13 interviewed however, there were three families (2 of which included young children) one elderly couple and an elderly person living alone. All but one respondent had owned their previous home, which in most cases was a dwelling unit in a high-rise building. None had any intention of moving from their present home.

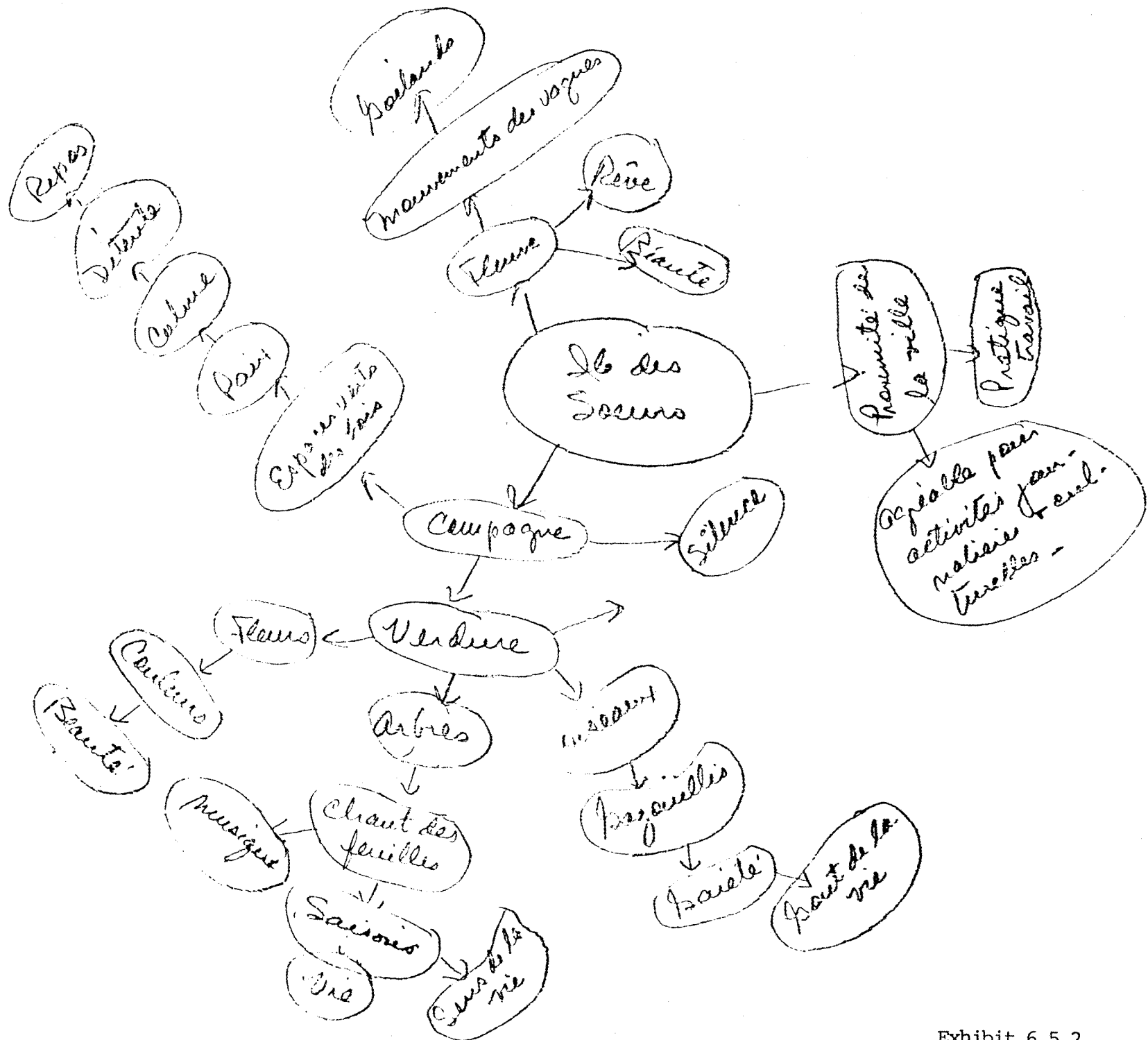
The responses to the question concerning childhood homes differed from all other groups. Here there was a relatively even split with three or four respondents indicating (1) they did not identify with a childhood home, (2) they had lived in a multi-family dwelling in an urban environment, (3) they had lived in a single family dwelling in an urban environment or (4) they had lived in a single family dwelling with considerable grounds in the country or a small town. Thus respondents in this housing group had been the most exposed to urban living and at the same time were the least likely to identify with any particular childhood environment.

6.5.2 Perception of the Island

Interestingly, many of the cognitive maps which respondents drew of the Island were more detailed than was the case for high-rise tenants. Four people included all major elements of the Island in fairly accurate maps while a further three included all of the major activity areas, road access and indicated where their home was located. Only 5 respondents did not indicate any houses or roadways and one drew a very localized map which did not show the outline of the Island. As with the other groups the golf course and forest were the only features consistently drawn. Among the detailed maps was one which included extensive reference to particular features and wildlife on the Island.

This basic knowledge of the Island was reflected in the cluster diagrams which also tended to be more detailed than those produced by high-rise tenants. Seven of the 14 included family or social life along with a wide range of concerns. One of these is reproduced on the cover of this document. A particularly sensitive cluster, which nonetheless does not include reference to family or friends is reproduced as Exhibit 6.5.2.

The country near the city theme was the predominate image of Nuns' Island for the majority of respondents. The forest and or golf course were mentioned by 4 respondents while open space generally and natural elements in particular sprang to mind for 2 people. Again the special nature of the Island is in its provision of a natural environment close to the city and not simply the sophistication of the residents or availability of modern high-tech housing.



6.5.3 Immediate Outdoor Space

All of the condominium projects on the Island provide similar outdoor space in that most residents have a private balcony, or patio and access to semi-public space which is shared with other residents of their building and, in two cases, residents of adjacent condominium projects. There is nonetheless substantial difference in both the size and quality of the semi-public space provided.

The condominium balconies had mixed reviews. Those who used their balcony regularly were most satisfied and thought of the balcony as another room with, in most cases, an outstanding view. Several mentioned that the view from the balcony was the primary factor in their selection of their particular unit within their building - anyone with a view of both the city and the river felt particularly well blessed. The less agreeable views were of the low-rise multi-family buildings along Berlioz.

As with high-rise tenants there was, some concern expressed about wind exposure - most mentioned that the wind occasionally restricted their use of this space.

Visual privacy was not a major issue although it was clear that most were somewhat exposed to people in other units. One elderly woman living alone valued the fact that her neighbours could see her as she felt that it would be easier to contact them if she had a problem. Several mentioned that they enjoyed seeing the activity on the ground and in one case the possibility of waving to friends passing by.

Audio privacy was satisfactory for all but one respondent. This was achieved by the fact that neighbours did not seem to be using their balconies at the same time or the discretion of their neighbours. Occasionally, however, there was excessive noise from the semi-public area below, especially from the pool.

There was some concern about dripping water or dirt down on people in balconies below. This is an important issue for those with mini-gardens or flower boxes.

The respondents with patios tended to be much less satisfied with their private outdoor space although they valued their direct access to the semi-public area. Small size, lack of privacy and lack of sun were the chief complaints. Most were contemplating landscape modifications, such as the introduction of a rock garden to mark their territory and reduce trespassing. Few people had introduced any modifications to their balconies or patio other than carpeting or arranging flower boxes.

In most cases, modifications to balconies or patios were not a simple matter due to the set of rules imposed by the condominium association. It was necessary to achieve the backing of a sufficient number of members before any significant modification could be introduced.

The semi-public areas were primarily used for walks, entertaining friends and swimming. In several cases a swimming pool was the focal point of this space. This facility occasionally proved too attractive to "undesirables". This was, nonetheless, the primary meeting point for condominium residents during the summer and is generally appreciated as long as there aren't "too many kids".

Children in general were not popular as they typically lacked the level of discretion and cooperation which residents felt were essential to maintain a satisfactory decorum. An eleven year old girl, living in one of the sleeker condominiums felt uneasy about this and tended to avoid the semi-public areas as a result.

Community concensus is a vital issue in condominiums and is essential for decisions concerning how semi-public space is to be used. While respondents were generally satisfied with their spatial arrangement there was some indication that they felt this satisfaction was due, at least in part, to the relatively small size of their community, and the ability to exclude the general community from their territory. These elements are evident in the following quote:

"Comme les gens se connaissent, ... qu'il sont tranquilles et respectueux des autres, c'est agréable de se partager l'espace."

Only two respondents mentioned that there were things which they would like to do but couldn't in the space available to them - both were mothers. One felt that it was not possible to relax on her patio due to a lack of privacy. The other regretted that it was not possible to let her child play unattended.

The illustrations of the outdoor space generally included the entire land area owned by the condominium and noted the major features such as buildings, swimming pool and river. Almost all clearly indicated where their private space, balcony or patio, was relative to the semi-public space.

6.5.4 Friends and Acquaintances

The majority of respondents have 4 to 8 friends and acquaintances on the Island. One respondent indicated that he had 60 acquaintances - presumably most of the members of his condominium association. Most of the friends and acquaintances were scattered widely within the richer areas of the Island. In almost all cases, however, respondents had at least one acquaintance within their building.

6.5.5 Places / Routes

The condominium respondents were among the most active explorers of the Island. All but four indicated that they had visited the entire Island with the exception of the area north of the Champlain Bridge, the industrial sector and the golf course.

Many included detailed comments about the attractions of particular sites. It was only with this group that Mont Soleil emerged as an interesting vantage point and some of the attractions of the lake and landfill area were revealed. Clearly condominium residents were very involved with the Island and especially the older development, the forest and landfill areas. One respondent commented that he took great pleasure in showing the forest to his visitors. (Exhibit 6.5.5)

6.5.6 Development Issues

None of the respondents were happy with the recent development of the Island. Most complained that there was no overall plan and no attention to architectural details or the need for green space. Some criticized the emergence of small densely packed stacked townhouse or low-rise townhouse units while others thought it was becoming "too high-risey". All of the respondents thought that the MSI development was much more successful and should serve as an example for further development. A key aspect was the continuation of the pedestrian pathway system. The comments of one woman, however, made it clear that this system would have to be significantly modified to serve the condominium areas:

"Les sentiers de la Phase I (MSI development) sont bien - mais dans le secteur des condos, si on ouvre le terrain aux gens on va être envahi - si on aménage de nouveaux sentiers dans le coin, faudrait qu'ils soient publics main clôturés de façon à empêcher l'accès aux propriétés privées, comme à Ogunquit (US)."

Almost all thought that the woods and golf course should not be developed as residential areas. Most, however, thought that the golf course should be transformed into a public park to better serve the community.

Nine of the 14 respondents were members of NIRA and were generally very satisfied with the representation of their views. All, however, felt that the residents had little influence over development issues. The establishment of an architectural and planning board was seen as the best means of ensuring good development as it provided for resident input yet incorporated professional skills.

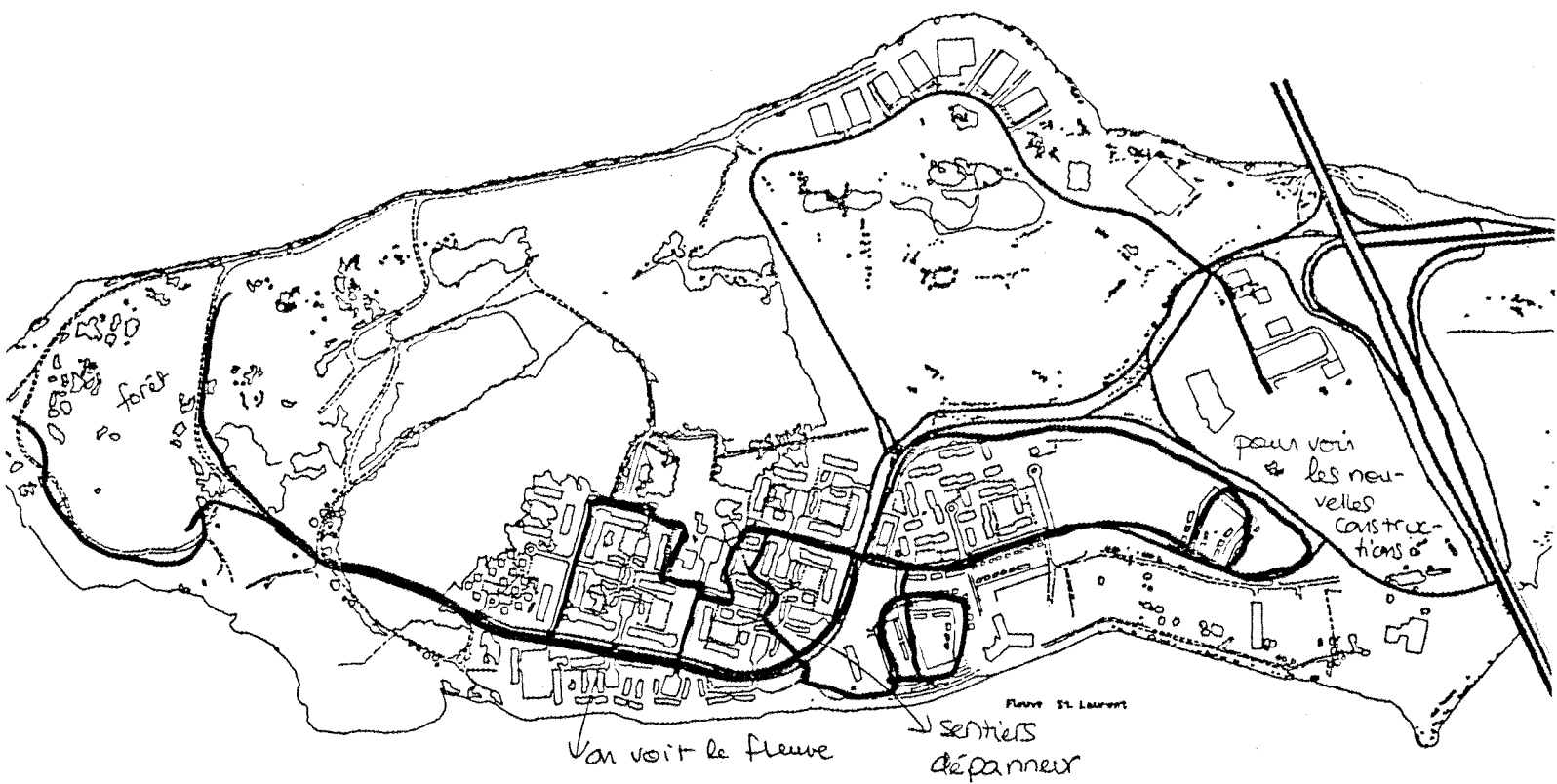


Exhibit 6.5.5

CHAPTER 7

RESIDENTIAL CONGRUENCE MEASURES

Chapter 7: Residential Congruence Measures

In this chapter residential congruence measures which describe the degree of fit between the residential environment and the expectation and behaviour of residents are elaborated. These measures are based on a synthesis of the results of the various approaches to quality assessment presented above. The possibility of employing similar measures within a legal framework governing development is considered in the next and final chapter.

The framework for this synthesis is based on the performance dimensions which Lynch (1981) presents in A Theory of Good City Form. The dimensions are:

1. Vitality
2. Sense
3. Fit
4. Access
5. Control

The performance of Nuns' Island with respect to each of these dimensions is discussed in a separate section below. The analytic framework, however, is not limited to the ideas which Lynch presents under each heading. Rather, a composite framework is used which draws on the person - environment models presented in Chapter 2. For example the notion of "fit" integrates Lawton and Nahemow's press-competence model; "access" refers to Maslow's safety - growth continuum and "control" incorporates Altman's privacy model.

Lynch argues that the performance dimensions are applicable to all human settlements irrespective of the location of the settlement or the time period under consideration. Location, time, culture and other factors, however, influence the trade offs which are made between dimensions by individuals in the use and modification of the environment under their control and by society which influences the distribution of environmental amenities among individuals. Lynch introduces two "meta criteria": efficiency and justice which may be used to assess these trade offs.

In comparison to the range of settlements which exist currently throughout the world, Nuns' Island is clearly very privileged and may be expected to be at the high end of most measures. There is, nonetheless, room for improvement and the need for modified design criteria prior to the use of this "model community" as a precedent for the design of new moderate to high density developments.

7.1 Performance Standards

7.1.1 Vitality

Vitality refers to:

"the degree to which the form of the settlement supports the vital functions, the biological requirements and capabilities of human beings." (Lynch, 1981, p. 118)

In assessing vitality, Lynch identifies three measures (1) sustenance (the supply of food, energy, water, air; the disposal of wastes; conservation of resources etc.), (2) safety (the absence of hazards, poisons and disease) and (3) consonance (the extent to which biological structures are supported by the environment).

Nuns' Island performs very well with respect to "vitality" thanks in large measure to a combination of the building code and the fact that developers hope to attract upper income buyers. The housing is safe and comfortable. There are few traffic situations where safety is a serious issue. There are no obnoxious industries. The most basic services are available on the Island and a complete range of supplies and services are located within a short distance. Currently an impressive variety of birds and small animals live in the forest or stop over during migration flights.

The problem areas with respect to vitality relate to the natural environment. The river is polluted to the extent that it is inadvisable to swim in it or eat the fish caught in it. The woods is in poor ecological shape due to shifts in the drainage pattern brought about by residential development and the lack of a maintenance program. The landfill area includes sections where garbage was dumped, thereby restricting future development and other locations where abandoned cars, stoves and so on are quietly decaying. No public green space has been set aside in any of the residential projects which followed MSI's development. In short the capacity of nature to support itself and to provide for the healthy development of people is in jeopardy.

The natural areas and recreational features of the Island perform important ecological functions and are highly valued by residents. They need to be considered in the evaluation of new projects.

Table 7.1.1 Residential Congruence Measures: Vitality

Environmental Condition	Performance Measure	Planning Considerations
Healthy & diverse flora & fauna	The number & diversity of flora & fauna habitats is maintained or increased	Conduct ecological study to establish baseline data
Water quality	Surface water drainage does not contribute to pollution	Conduct drainage study Restrict development along river to ensure adequate filtration Avoid large impermeable surfaces
Land quality	Development options for landfill are enhanced	Control fill quality
Gardening	Gardening is possible for all residents	Establish micro-climatic conditions with particular reference to solar & wind exposure Ensure patios & balconies can accommodate a small garden Provide sufficient community gardens

7.1.2 Sense

Lynch defines "sense" as ...

"the degree to which the settlement can be clearly perceived and mentally differentiated and structured in time and space by its residents and the degree to which that mental structure connects with their values and concepts." (Lynch, 1981, p. 118)

Environments which perform well on this dimension are distinctive in that they have features which people associate with that particular place. As Relph (1976) notes all too often there is a sense of "placelessness" in our urban environment which comes about through the ubiquitousness of building type as exemplified by the strips of fast food outlets. Design which draws on the unique, special features of a location contribute to a sense of "place".

An important aspect of a place is the degree to which its structure and function are hidden or apparent. While it is important to have a sense of how a place fits together (ie. a "mental map" of the landscape) some mystery which may gradually be resolved as one proceeds is also desirable. In any case there should be a match between social expectations and the environment.

Nuns' Island clearly has a very strong sense of "place". Respondents to both the telephone and detailed questionnaires resonated to the image of the "city in the country" or, alternatively, the "country in the city". Nature, recreation opportunities and a cosmopolitan lifestyle with plenty of services close by were cited over and over again by respondents. For many residents these environmental characteristics provide a unique combination of the attributes of their childhood home (which for all but condominium owners tended to be in single family small town or rural settings) and the need for professional work opportunities. The degree to which these images are shared by residents is striking.

The fact that the community is on an island, the presence of the river, woods and major recreational, community and shopping facilities were the most predominate images in the cognitive maps of the residents. These elements were included in almost all of the mental maps and in some cases were the only elements drawn. They form the essential aspects of the Island's image and contribute to the sensual enjoyment of all residents. An outdoor lifestyle and in general closeness to nature were important elements for many of the respondents.

The Island currently meets many of the expectations of residents. It provides natural paths, a wooded area and extensive wild areas which, while rarely visited by residents, are highly valued. There are secret places, mysteries to be uncovered in the marshes,

forest undergrowth and along the riverbank. Many residents are intimately aware of special places where particular types of wildflowers grow or birds congregate. The activity maps indicate that most have explored the Island widely on foot and take pleasure in showing special features to guests.

The Island's image, however, is essentially based on the early development of MSI and the substantial areas which are presently "wild". While more recent development includes many attractive features it does not contribute to the "city in the country" notion. On the contrary, some of this development contributes to a sense of placelessness by replicating standard housing forms. Other projects offer an avant-garde, high-tech environment, which appeals to the desire for a cosmopolitan environment but does not contribute to the central image of the Island for most residents due to the lack of open space and recreational facilities incorporated in the site plan. All respondents and most especially those in the newer developments complained about a lack of planning and attention to aesthetics in recent years.

Development controls are needed to ensure that new projects will contribute to the "city in the country" image of the Island which is shared by most residents - new and old. These include:

Table 7.1.2 Residential Congruence Measures: Sense

Environmental Condition	Performance Measure	Planning Considerations
City in country image	Landscape offers open views of green space, river, and city	Develop view sheds
		Require landscaping plan for new developments
		Restrict fences in favour of hedges
		Extend pathway system
		Provide community gardens

Natural & recreational environment

View on entry to the Island emphasizes recreation & nature theme

Plan sequence of views from roadway

Extensive "wild areas" are maintained

Establish area of natural zones affected by development

Determine extent to which natural areas may support current activities

Prepare natural maintenance plan

Sophisticated residential environment

Architecture reflects recent trends

Zoning by-laws & planning process do not prohibit innovation

Aesthetic quality

Building architecture is harmonious

Establish design review process

Landscape is well maintained

Landscape monitoring & maintenance plan

7.1.3 Fit

The degree of fit refers to:

"the degree to which the form and capacity of spaces, channels, and equipment in a settlement match the pattern and quantity of actions that people customarily engage in, or want to engage in - that is the adequacy of behavior settings, including their adaptability to future action." (Lynch, 1981, p. 118)

Fit is not simply the availability of space and equipment intended for particular purposes in sufficient quantities to meet standards. Rather it is an iterative process by which people attempt to use their environment in desired ways. It is a function of the availability of space and equipment, the flexibility or malleability of the environment and the ability of individuals or groups to make changes.

The ability of individuals to make changes in their environment is dependent on their own competence, the flexibility of the environment and the extent of control which they are legally (or socially) entitled to exercise over their environment. This section will focus on the first two items. Control is treated as a separate dimension below.

In assessing residential quality it is important to note that the best environments are not necessarily those which perfectly match the expectations and behaviour of residents. On the contrary, the press - competence model discussed in Chapter 2 suggests that in an ideal situation people will be challenged to use their own resources to engage with their environment. Too much challenge, however, will lead to abandonment of the task while too little leads to boredom. Both contribute to maladaptive behaviour. The challenge in designing "planned communities" has been to provide an appropriate level of stimulation.

Achieving an appropriate level of fit is complicated by the differences in the expectations, desired behaviours and degree of competence among people and even for individuals who tend to have different preferences and capabilities during different time periods in their lives. Flexibility is a must.

Nuns' Island offers a satisfactory fit for most residents. Respondents to the questionnaires were generally very satisfied with the space and range of amenities available to them both on the Island as a whole and in the outdoor space around their own building. There were, however, important differences in the level of satisfaction with different amenities and between respondents in different housing environments.

Satisfaction was highest with green space, general upkeep and traffic. Significantly less satisfaction was evident with

recreation facilities and stores while high levels of indifference were expressed with respect to play space and the friendliness of neighbours. The indifference with play space is mostly among people without children - when they are excluded high rates of satisfaction are evident.

Generally the owners are less satisfied than the tenants with green space, recreation facilities, play space and upkeep. This is a reflection of the failure of developers to extend the planning principles which are present in the MSI development. These principles have played a role in creating an image for the Island and raised expectations among owners which have not been fulfilled. High-rise tenants and condominium owners are less satisfied with traffic and parking conditions than the other groups.

While this study did not provide a measure of the satisfaction of different members of a household it is likely that significant differences would be evident. Children are well accommodated in the MSI development as the buildings are surrounded with plenty of traffic free green space. Even toddlers can explore their environment with safety. There are, however, an insufficient number of equipped parks within easy walking distance. Older children are also well accommodated due to the possibility of exploring the forest and landfill areas and the presence of large numbers of children their age. For children there is an excellent match between competence and environmental press.

Teenagers, however, do not have the same critical mass or appropriate facilities available. For them the level of environmental press is insufficient to provide enough stimulation.

Young singles or couples also do not find a sufficient level of stimulation on the Island but they are more likely than teenagers to have a car. Their higher level of "competence" allows them to cope with low press levels.

The Island has offered extraordinary facilities to parents of young children. The availability of safe play areas free them to spend time with each other while supervising children. Each of the three play areas provide space for groups to sit while supervising play activities. The courtyards also provide a protective environment with easy surveillance. The lower environmental press for child rearing in this case frees parents to engage in related pleasurable activities. None of these facilities are easily available to parents living in the new owner occupied sections of the community.

Adults without young children constitute a large percentage of the population. For this group the Island provides a happy mix between a professional, cosmopolitan life style and country living which is reminiscent of their childhood home. The possibility of extended nature walks, cross country skiing, tennis or simply relaxing in a landscaped setting are attractive

complements to the excitement of the city.

Older people are especially attracted to the condos and high rise apartment buildings which provide a high level of security and amenities without requiring personal involvement with maintenance activities. The low environmental pressure of the Island is also attractive to this group. It is possible to walk or bike to convenience stores. As this group becomes more numerous, however, it will be necessary to provide more extensive activities than are presently available on the Island.

The degree of fit was found to vary between different housing environments. Residents of townhouses, owned or rented, gave a great deal of emphasis to their relationship to the outdoors. The most vital outdoor space was the patio which was extensively used for eating, reading, relaxing, visiting, and supervising children. Concern was expressed with the size, micro climate and privacy of patios. The more successful patios provided room for four to six people to eat around a table, protection from wind, exposure to sun (which could be controlled with lawn furniture) an agreeable view and some degree of visual privacy. Audio privacy was considered too much to ask for - but it would be an element in an ideal setting. Many respondents indicated that they had modified their patios to meet some or all of these objectives. Generally the patios provided by MSI and developers of the owner occupied townhouses were not considered sufficiently large or private.

Townhouse yards were more controversial. Most residents of owner occupied units felt that their yards were too small to be of much use - except as a place for very young children to play, dogs to roam, a small garden or a swimming pool. Fences effectively limited the view and eliminated the possibility of more extensive activities.

The situation was dramatically different for residents of rented townhouses who were not permitted to erect fences or other definitive signs of territoriality. This group has less privacy but better access to semi-public and public space which is attractively landscaped. It is therefore possible to go searching for some sun to sit in, or direct the children to play a little further from home unlike the situation for fenced yards. This group placed a high value on the social opportunities offered by the proximity of semi-public space. On the other hand, many missed the opportunity to be more active gardeners.

Apartment and condominium residents were concerned with both their balconies and the semi-public or public space which surrounded their building. Most would have liked to use their balconies for activities which were similar to those available to townhouse residents with patios. Few balconies, however, could accommodate 4 to 6 people sitting around a table and provide the range of amenities available to people with patios. The best arrangement was available in MSI Phase I and II buildings with recessed balconies. These, however, were criticized for

eliminating the possibility of seeing the ground when seated. Views were a major compensating factor for many residents.

The semi-public and public areas around the rental projects tend to be well used. Many residents, especially those living alone, enjoy the opportunity to sit with other residents or friends outside their building. These spontaneous groups may spend hours eating, drinking, reading, talking and sunning.

Aside from the swimming pool the semi-public spaces offered by the condominium projects are generally less extensively used. It is probable that they are often too small or too controlled.

Table 7.1.3 Residential Congruence Measures: Fit

Environmental Condition	Performance Measure	Planning Considerations
Recreation facilities	Residents will have access to desired facilities within walking distance	Complete recreational study Allocate facilities to strategically located parks
Commercial facilities	Residents will have access to basic daily services within walking distance and a reasonable range of higher level goods	Plan for establishment of neighbourhood mini-commercial centers
Play Areas	Children will have safe access to active & passive park setting Children will have opportunity to explore the woods	Extend pathway system Provide protective courtyards Maintain natural woods setting Incorporate "wild" landscape along some pathways
Private Space	All residents have access to private outdoor space large enough for 4 people	Plans for patios & balconies Provide clear territorial definition and separate private and public zones by a semi-public buffer

	All residents are able to have a small flower and vegetable garden	Plans for patios & balconies
	All residents are able to modify their environment to suit their particular needs	Plans and policies for patios & balconies
	All residents are able to view activities (e.g. supervise children) in a semi-public space from the private space	Landscape plan
Semi-public space	All residents have access to semi-public space which is used primarily by residents of their area	Plan for courtyards
	Residents feel comfortable using this space to sit in spontaneous groups	Landscape plan
Special needs	Teenagers have access to engaging activities	Conduct recreation study
		Ensure good access to city by public transport and bicycles
	Parents are able to supervise children from their dwelling units or in small groups at local parks	Offer sufficient buildings of 4 storeys or less which overlook courtyard
		Plan parks to accommodate needs of parents as well as children
	Elderly people have access to a wide range of challenging activities	Conduct survey to establish needs
		Extend pathway and bike system
		Provide activity nodes
		Provide better library and church facilities

7.1.4 Access

Access refers to:

"the ability to reach other persons, activities, resources, services, information, or places, including the quantity and diversity of the elements which can be reached." (Lynch, 1981, p. 118)

In general terms Nuns' Island rates very high on the access scale by providing a wide variety of recreational and nature oriented activities within a five to ten minute drive of the central business district of Montreal. The proximity of the autoroutes is especially helpful in this regard. Nonetheless, the increasing population of the Island has overloaded the links to the autoroutes and created morning rush hour jams.

Residents without cars are less fortunate. Travel to Montreal's CBD takes 25 - 30 minutes and the buses are infrequent outside of the rush hours. Bus routes have also been a point of contention as it is often necessary to walk for five minutes to reach the nearest stop. While bike paths are available on the Island which are linked with a major network operated by Parks Canada along the Seaway there is no link with the Island of Montreal. The lack of facilities on the Island makes these car, bus and bike links vital.

The original concept for the Island provided for a high level of accessibility as convenience stores, community services and play grounds were to be located within walking distance of most residences. Safe, pleasant pedestrian pathways were a feature of the design.

This typical "planned community" concept was abandoned with the development of owner occupied units. In addition a larger scale shopping center, Le Village, was built at an extreme end of the community near the Champlain Bridge. This center was beyond the comfortable walking distance of most residents. As stores closed in the only existing neighbourhood center to relocate in Le Village the Island quickly adopted a suburban shopping pattern with reliance on cars for most trips.

Pedestrian access to community facilities is not addressed adequately in the post MSI development. Access is exclusively via sidewalks which follow an occasionally chaotic road pattern brought about by piece meal development. Obvious places for pedestrian short cuts have not been taken advantage of.

The new developments have done more than to simply fail to plan for pedestrians. They have also cut off access to the shoreline and eliminated many short cuts which had been available. The lack of a pedestrian network does not meet with the approval of the new residents. On the contrary an overwhelming majority value the existing walkways and courtyards and are in favour of having these amenities in new developments.

Access to information is provided by a bilingual weekly newspaper which is delivered free of charge to each household. This paper has served a very important function in community development.

Table 7.1.4 Residential Congruence Measures: Access

Environmental Condition	Performance Measure	Planning Considerations
Access to local services	Residents have direct access to a network of pathways leading to all major facilities & recreational areas	Extend pathway system Provide hierarchy of services
Access to CBD	All residents have easy access to Montreal CBD	Plan for improved automobile access, bus service and bike path link to Island of Montreal
Access to Shoreline	Residents will have access to the full shoreline	Pathway plan
Access to parking	A private parking space is provided within comfortable walking distance of residence Special provision for loading and unloading is provided	Site plan

7.1.5 Control

The degree of control which individual residents have over their immediate environment and the development of their community is a vital issue in residential quality. Lynch considers this dimension to be:

"the degree to which the use and access to spaces and activities, and their creation, repair, modification, and management are controlled by those who use, work or reside in them."(Lynch, 1981, p. 118)

Several levels of control may be distinguished: (1) right of presence, (2) right of use and action, (3) right of appropriation, (4) right of modification, and (5) right of disposition. All levels are appropriate in different circumstances. Good control is certain, in that everyone understands the system and feels secure; responsible in that those in control have the ability and willingness to maintain control; and congruent with the expectations of society.

The possibility of exercising some degree of personal control over social contracts is vital to the well being of people and contributes to a sense of personal effectiveness (Altman, 1975). This process often involves manipulating the environment to establish and maintain a hierarchy of territories ranging from public to semi-public, semi-private and private. Boundaries between these different territories are especially important as it is here that control over the presence and behaviour of others is exercised.

Control mechanisms may be subtle cues such as an arrangement of chairs, the presence of personal effects or sight modifications to the environment, such as a small flower garden, which were clearly done by an individual rather than the municipality or housing authority. Indicative plantings, slight changes in elevation can also be effective.

More rigid approaches to territory demarcation include fences, hedges, surveillance cameras, signs, verbal enforcement and finally physical restriction.

There are as well different degrees of control which are exercised over the community planning process. These forms of control generally take place within some form of public consultation process which is often required by law when certain planning or zoning decisions are made. Arnstein (1969) developed a useful ladder illustrating the different types of control ranging from manipulation through consultation to citizen control. Most public participation processes do not go beyond the hearing stage although it is possible for residents to actively reject loan bylaws and zoning changes which are proposed following the consultation period.

7.1.5.1 Community Control

Nuns' Island residents are not a group which one would expect to be powerless to direct change in their environment. As indicated in Chapter 3, they are, on the whole, wealthy, well educated, skilled individuals, many of whom are employed as professionals. Further, the cosmopolitan background of the residents, suggests that they bring to the Island diverse planning ideas and living experiences and have full access to information and the decision making structure in both the English and French milieus. Many are also active members of a well organized association - the Nuns' Island Residents' Association - which has in recent years been primarily concerned with development problems. In spite of all this potential, however, they feel that they have had little control over development issues on the Island.

Island residents feel that the primary reason that they have not been successful in directing development of their community is their affiliation with the City of Verdun. Many note, quite accurately, that there are substantial differences between the socio-economic characteristics of Island residents and the population of the rest of the municipality. These differences, they feel, result in an inability of the councillors representing "mainland" Verdun to fully comprehend their point of view. As this includes 11 of the 12 city councillors the odds appear to be against them. NIRA is strongly supported, and is considered to try very hard but with little success.

Clearly the residents have had mixed success in influencing development on the Island. The greatest success story is the woods, which it now appears will be conserved following vigorous struggles involving many different governmental bodies and developers over 8 years. Their greatest failure was the development of the golf course which some 90% of the community strongly opposed. The failure of citizen action with respect to this project is instructive. NIRA's strategy was to adopt an "all or nothing" stance. This precluded effective participation in helping to design a project which may have met key concerns yet been economically feasible for the developer and the City.

The presence of large, contentious development issues made it difficult to focus public attention on smaller scale projects which were transforming the Island on an incremental basis and ultimately would have a very great effect on the quality of the outdoor space on the Island. Even community wide planning concepts such as the extension of the pedestrian pathway system, access to the shoreline, the development of architecturally harmonious mixed housing groups with courtyards and a policy on fences received little attention. A municipal plan which included these points AND opted for development of the golf course received vigorous community opposition without any substantial discussion aside from the golf course development. Yet respondents to the questionnaire indicated that these items were important and should be included in a plan.

Most Island residents consider the early MSI development to be a model for future development. The lack of many of the concepts in the owner occupied areas has contributed to the very high level of involvement of owners in community development issues. High taxes, and the low service to tax ratio were other reasons for this group's involvement. Tenants were also very active but many, especially those in Phase I & II, felt that they were sufficiently far from the new development areas that they would not be adversely affected.

7.1.5.2 Territorial Control in Different Housing Groups

Each of the housing groups have made different trade offs in the allocation of private, semi-private, semi-public and public space which affect the ability of residents of these projects to control their degree of privacy.

The outdoor environment of the rented townhouses provides the least amount of clarity in territorial control. Residents in these units use a variety of props, such as chairs, flower pots, towels and occasionally a rope strung between trees to claim private territory. The extent to which these are effective depends on the distance they are from the unit, the extent to which they suggest that a contiguous unit is "private", the environmental features which support the resident's territorial claim - trees, shifts in elevation - and the location of the unit relative to the pathway and other units. No resident has been successful in blocking access between the cul-de-sac and the interior pathway system although these access points are very close to the unit. Yet residents of all units along Darwin Rive have a secure private and semi-private environment due to the presence of a fence which forces pedestrians to use a pathway which is some distance from the units and below the dike.

The lack of physical territorial cues in the rented townhouse environment requires residents to rely primary on their own behaviour to control their degree of privacy. Some of the ways this is effected were described in Chapter 6. It is likely, however, that both residents and passersby would be more comfortable if larger, more clearly defined private areas were provided. One way to do this would be to plant low, three foot, hedges about twenty feet from the building facade. The security of knowing who is in control of the space and what behaviour is expected would likely promote use of the space.

Residents of the owner occupied townhouses have adopted a range of solutions. Some claim their full property by erecting fences or hedges while others attempt to replicate the MSI approach by maintaining a private patio but leaving a common area open which is shared with other residents in the block. Experience indicates, however, that extensive concerted effort is required to maintain a common area. Any one resident, or future resident, could erect a fence effectively eliminating much of the quality of the open space and leading to a chain reaction among other residents. It would be necessary to have a binding agreement

among block residents to guarantee that the common area would remain. Alternatively, the municipality could provide this assurance by extending the pathway system as a public amenity.

There are indications that a planning concept which offered a very private space with direct access to a semi-private space or semi-public space would be attractive to new home owners. This arrangement would eliminate some of the visual confinement of a small narrow lot without eliminating the possibility of doing most of the activities which respondents indicated they like to do outdoors.

The low-rise and high-rise apartment tenants have different privacy control needs as the space available to them is more clearly defined as private or semi-public. Most would like more control over the degree of privacy of their balconies. Moveable screens which provide visual and wind protection would increase personal control which is lacking in both the solid concrete and iron railing balconies.

For some the proximity of balconies to a semi-public pathway is problematic. Occasionally it is necessary to run a "gauntlet of eyes" while walking along a pathway to an apartment unit. This situation becomes especially uncomfortable when both individuals feel they have to acknowledge each other. A pattern is set up that dictates some verbal exchange each time the individual passes unless extreme body language and averted gaze are used to control contact.

Comfortable use of the semi-public areas also requires an array of delicate signals to indicate whether one wishes to be joined while sitting in the courtyard. This is controlled by the orientation and proximity of one's chair to the pathway and again with body posture and gaze aversion. Proper planning of these spaces can help by providing a range of sitting environments via landscaping features. It should be possible to sit without being interrupted yet also possible for other residents to "preview" the scene without feeling committed to join a group.

The environment around the high-rise apartments is generally well used as semi-public space although residents of a building which does not have balconies feel that their area is too public - especially around the pool.

Condominium owners exercise more control over their semi-public space. Access is restricted to members of the building and written rules governing behaviour may be set out. Environmental features similar to those in rental areas are necessary to ensure comfortable use of both private and semi-public areas.

Table 7.1.5 Residential Congruence Measures: Control

Environmental Condition	Performance Measure	Planning Considerations
Territorial marking	Private, semi-public and public spaces are available to all residents	Site plan
	Clear distinctions between types of territory are provided	Site plan
	Residents will understand the intended behavioural cues for each type of space	Monitoring, landscape modification
Participation	Residents can exercise effective control over the transition between different territories	Site plan landscaping Provision of territorial signals (e.g. a garden gate) which are controlled by residents. Attention to view to eliminate forced eye contact
	It is possible to "preview" a scene before deciding to join a group	Plan for semi-secluded areas
Malleability	Residents may modify their private space to suit their personal taste Flexibility for both current and future residents is built in	Architectural & site plan
Community development	Residents have access to information concerning the development of the community A formal procedure exists to take the views of residents into account	Planning process Provision of workshops and hearings
	Residents feel that they have an effective role in community decisions	The impact of resident comments is explicitly monitored

Overall Assessment

It is clear that Nuns' Island residents fare very well. They enjoy a range of environments which provide a choice of housing accommodation in exceptionally diverse outdoor settings. The residential quality is, however, not 100% with respect to any of the five performance dimensions proposed by Lynch. While elements related to access, vitality and sense are key contributors to the overall feeling of residential quality, access is good only by car, vitality suffers from pollution and sense is not well managed in the newer areas due to a lack of aesthetic control.

Both fit and control could be improved. Control is especially critical to the satisfaction of residents as they have been largely ineffective in directing community development and live in an environment where subtle forms of control over personal contact is crucial.

Nuns' Island is an interesting experiment in community development. It includes housing settings which incorporate inventive solutions to medium to high density development. These models, however, must be applied with care. None are perfect. Adjustments are required to improve the arrangement of territory and the control which individuals are able to exercise over the space. Significant improvement is not possible without playing attention also to the community decision making process.

CHAPTER 8

LAND USE CONTROL MEASURES

Chapter 8: Land Use Control Measures

Land use controls which may be used to provide a legal framework for implementing residential congruence measures are discussed in this chapter. Following a brief review of alternative approaches, the characteristics of an appropriate legal framework, which may be applicable in contexts where development is hotly contested such as Nuns' Island are presented. An overview of Nuns' Island's experience with land use controls is presented in Chapter 1.

8.1 Alternative Land Use Control Approaches

Alternative legal frameworks for subdivision and land use control have been debated extensively. The most common approach is "as of right zoning" which specifies the use, density and certain design or construction elements for discrete spatial zones. This approach to land use control may be effectively used to protect sensitive environmental amenities and eliminate serious land use conflicts. Yet "as of right zoning" is often criticized for failing to provide sufficient opportunity for innovative development which is fully sensitive to the site and market conditions. It is also often insensitive to the qualitative qualities which ought to be present in a plan.

The failure of traditional zoning to provide an appropriate balance between control and flexibility has led to other options. Barnett (1982), for example, suggests that performance standards which stress key areas of concern yet allow for a range of design solutions, such as planned unit development, is preferable to traditional controls. In a similar vein, Richman (1979) advocates the use of "social performance standards" which draw attention to desired relationships between people and their environment. This type of openness to innovative design was evident in the planning process adopted for LeBreton Flats, Ottawa (CMHC, 1983). Here detailed guidelines were elaborated on an incremental basis for each 500-1000 unit phase in what was essentially a continuous planning process.

All of the options to traditional zoning depend on an effective administrative and review process. As, in some instances, this process may be time consuming, involve discretionary judgements and fail to provide sufficient guidance for developers, New York City has attempted to combine flexibility with explicit regulations. Essentially developers receive "points" if they include certain design elements which are explicitly set out and the score achieved influences the floor area ratio permitted. Minimum scores must be achieved for each of four categories: neighbourhood impact, recreation space, security and safety, and design (Barnett, 1982).

8.2 Appropriate Land Use Controls

Effective land use controls must strike a balance between control and flexibility. Firm control is needed to protect vital natural

areas and provide some measure of reassurance to developers and residents alike. Flexibility is needed to accommodate innovative development ideas and enable current and future occupants to fine-tune their environment. All interested parties should feel that they have an input in the development process. Each of the performance dimensions discussed in Chapter 7 should be explicitly addressed.

Appropriate land use controls for a context such as Nuns' Island would:

1. Apply restrictive zoning regulations in environmentally sensitive areas, such as the woodland, and the industrial and commercial zones.
2. Delineate the location of key structural elements, such as major arterials and general land use classifications (commercial, residential, industrial, recreational).
3. Identify performance standards for new development which describe in positive terms the characteristics of "good" development for the particular area. These standards would, in effect, serve as a check list in the evaluation of new projects. The requirement that developers explicitly address each concern would in itself result in greater sensitivity to key issues. The use of a "point" system with minimum requirements with respect to different concerns would be an important consideration.
4. Provide a means by which performance standards may be reviewed and altered with the participation of all interested parties.
5. Appoint an architectural and planning review board to assess the extent to which development proposals meet restrictive zoning regulations, planning objectives and performance standards. This committee should consist of professionals who enjoy the confidence of residents and the city administration.

This approach to land use control would respond to many of the concerns expressed throughout the assessment of residential quality on Nuns' Island. Essentially it would provide a firm basis for planning and a process which would allow all interested parties to have an active role in the development process on an ongoing basis. The opportunity for residents to discuss performance measures with professionals would contribute to superior design and would likely lead to a greater understanding

of the importance of subtle, small scale design decisions in the overall quality of residential areas. While this approach would not have an easy answer to large scale decisions such as whether to develop a golf course it may help ensure that the most important considerations of all interested parties are taken into account.

APPENDICES

APPENDIX 1

INFORMATION COLLECTING INSTITUTE INC.
500 Sherbrooke West, Room 250
Montreal, Que. H3A 3C6 Tel.: 288-2123

30/5/86

NAME: _____

STUDY NUMBER:

8	3	6	0	0	1
1	2	3	4	5	6

TELEPHONE NO: _____

QUESTIONNAIRE NUMBER:

7	8	9	10

COMPLETE ADDRESS: _____

DAYS:

11	12

LANGUAGE: French
English

1
2

13

CALL (Time)	DATE day-month	COM- PLETE	NO ANSWER	REFUSAL HOUSEH.	RESPON. REFUSAL	RESPONDENT ABSENT	FOREIGN LANGUAGE	DISC. NUMBER	NON RESI- DENTIAL	OTHERS
		M F		M F						
		M F		M F						
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REASON FOR REFUSAL: _____

INTRODUCTION

Good day (good evening) I am _____ from the Information Collecting Institute. We are conducting a study among Nun's Island residents that are 18 years or older?

Q.A Do you presently live on Nun's Island?

(14)

yes..... 1

no..... 2- END

SELECTION OF RESPONDENT

First of all, I would like to know how many adults (18 years and over) live in your household? How many of these adults are gentlemen?

There are _____ adults in the household,

and _____ are gentlemen.

--

INDIVIDUAL INTERVIEW

I would like to speak to: _____

(characteristic of respondent)

(IF SELECTED RESPONDENT IS ABSENT, ASK FOR DAY AND TIME THEY CAN BE REACHED AND NOTE.)

DAY: _____ TIME: _____

FIRST NAME: _____

SEX: Male..... 1
Female..... 2

(15)

QUOTAS

	Quest. 1	Quest. 2
Group 1	1	1
Group 2	1	2 or 3
Group 3	2	1
Group 4	2	2
Group 5	2	3

(16)

SECTION 1: RESIDENTIAL SITUATION AND SAMPLE SELECTION

1. Are you a home owner or a tenant? (17)
- owner..... 1
- tenant..... 2
2. What kind of house do you live in? Is it... (18)
- a single family semi-detached or townhouse..... 1
- an apartment or a condominium with 6 or fewer storeys... 2
- an apartment or a condominium with more than 6 storeys.. 3
3. How long have you lived at this address? (19)(20)
- _____ years
- or _____ months

SECTION 2: STANDARDS OF COMPARISON

- | | | |
|----|---|----------|
| 4. | Did you own or rent the dwelling that you lived in just before moving to your present address? | (21) |
| | rent..... | 1 |
| | own..... | 2 |
| 5. | What kind of building did you live in? Was it... | (22) |
| | a detached or semi-detached single family house..... | 1 |
| | a townhouse or rowhouse..... | 2 |
| | a duplex or triplex..... | 3 |
| | an apartement or condo with less than 4 storeys..... | 4 |
| | an apartment or condo with 4 or more storeys..... | 5 |
| 6. | When you moved to your present home you may have looked at a number of residences before deciding to move here. What was your main reason for choosing this dwelling over all the others you looked at? | (23)(24) |
| | (DO NOT READ) view..... | 01 |
| | (ONE REASON) cost..... | 02 |
| | size (interior space)..... | 03 |
| | outdoor space..... | 04 |
| | neighbours..... | 05 |
| | good for children..... | 06 |
| | quiet..... | 07 |
| | proximity to stores and services..... | 08 |
| | quality of design..... | 09 |
| | recreational facilities offered by condominium..... | 10 |
| | other: _____ | 97 |
| | (specify) | |

SECTION 3: RECENT RESIDENTIAL HISTORY

7. In what year did you first move to Nuns' Island?
_____ years (25)(26)
8. In what area did you live just before coming to the Island?
_____ (27)(28)

9. What is the most important factor which influenced your decision to move to the Island? (1 ANSWER)

(29)(30)

proximity to work.....	01
proximity to downtown.....	02
proximity to schools.....	03
proximity to friends.....	04
natural ambience (woods, river).....	05
recreational facilities.....	06
view of downtown.....	07
view of the river.....	08
quality of design.....	09
cost of housing.....	10
availability of particular dwelling unit.....	11
community status.....	12
other: _____	97
(specify)	

SECTION 4: VALUES

10. Assuming money was not a problem, name the most important characteristics of the ideal neighbourhood where you would like to live?

(31)(32)

SECTION 5: IMAGE/FIT

NOW I WOULD LIKE TO ASK ABOUT YOUR PRESENT NEIGHBOURHOOD.

11. I am going to read a list of neighbourhood amenities. Would you please indicate whether you are very satisfied, somewhat satisfied, somewhat dissatisfied, very dissatisfied or indifferent with respect to each of the amenities.

	Very satis.	Somewhat Satis.	Somewhat Dissatis.	Very dissatis.	Indif.	D.K.	
the amount of green space on the Island.....	1	2	3	4	5	8	(33)
the variety of recreational facilities.....	1	2	3	4	5	8	(34)
the variety of stores on the Island.....	1	2	3	4	5	8	(35)
the mix of people and their interests.....	1	2	3	4	5	8	(36)
the friendliness of your neighbours.....	1	2	3	4	5	8	(37)
the playing space for children.....	1	2	3	4	5	8	(38)
the general upkeep of the neighbourhood.....	1	2	3	4	5	8	(39)
the amount of traffic on your street.....	1	2	3	4	5	8	(40)
the proximity of your parking space to your home.....	1	2	3	4	5	8	(41)

12. I will mention some characteristics of the urban development of Nun's Island. Could you tell me if you find that these were a very good idea, a good idea, a bad idea or a very bad idea?

	Very <u>good</u>	<u>Good</u>	<u>Bad</u>	Very <u>bad</u>	<u>D.K.</u>	
1. the mix of housing types like the clusters of apartments and townhouses in some of the earlier part of the development.....	1	2	3	4	8	(42)
2. the pedestrian pathways which run between the townhouses and apartment buildings in the early development.....	1	2	3	4	8	(43)
3. the courtyards which are separated from public streets.....	1	2	3	4	8	(44)
4. the bike path.....	1	2	3	4	8	(45)

13. Are there any special areas on Nuns' Island which you feel should be protected from development? (46)

yes..... 1
no..... 2- GO TO Q.15

14. Which areas? (MAXIMUM 2) (47)(48)

(DO NOT READ) woods..... 1
golf course..... 1
landfill area..... 1
northern tip of Island (past Champlain Bridge)..... 1
the Meadows (field between Berlioz and Nuns' Island Blvd)..... 1
the riverside..... 1
all undeveloped areas..... 1
other: _____ 1
(specify)

15. Are you very favorable, rather favorable, rather unfavorable or very unfavorable to residential construction on the golf course? (49)

very favorable..... 1
rather favorable..... 2
rather unfavorable..... 3
very unfavorable..... 4

16. If new development were to occur on the Island would it be very important, somewhat important, not too important or not important at all to include the following amenities?

	Very <u>imp.</u>	Somewhat <u>important</u>	Not too <u>important</u>	Not imp. <u>at all</u>	<u>D.K.</u>	
a pedestrian pathway system.....	1	2	3	4	8	(50)
a mix of housing types.....	1	2	3	4	8	(51)
fences or hedges around private yards.....	1	2	3	4	8	(52)
courtyards separated from traffic..	1	2	3	4	8	(53)

SECTION 6: ACTIVITIES IN THE NEIGHBOURHOOD

17. I am going to mention several different places which people often go on the Island. Would you please indicate whether you go to these places daily, a least once a week, once a month, less than once a month or never.

	Daily	A least once a week	Once a month	Less than once a month	Never	
1. the woods.....	1	2	3	4	5	(54)
2. the parks.....	1	2	3	4	5	(55)
3. the golf course.....	1	2	3	4	5	(56)
4. the stores.....	1	2	3	4	5	(57)

SECTION 7A: PRIVATE OUTDOOR SPACE

I WOULD LIKE TO ASK A FEW QUESTIONS NOW ABOUT THE OUTDOOR SPACE AROUND YOUR RESIDENCE.

18. What kind of private outdoor space do you have? Do you have:

	Yes	No	
1. a private balcony.....	1	2	(58)
2. a private patio.....	1	2	(59)
3. a private yard.....	1	2	(60)
4. no private outdoor space.....	<div style="border: 1px solid black; padding: 2px;">1</div>	2	(61)

GO TO Q.22

19. In general, are you very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied with your private outdoor space (balcony, patio, yard)? (ASK QUESTIONS CONCERNING LARGEST WHETHER IT IS THE BALCONY, PATIO OR YARD)

very satisfied.....	1
somewhat satisfied.....	2
somewhat dissatisfied.....	3
very dissatisfied.....	4
indifferent.....	5

20. What pleases you most about your private outdoor space (balcony, patio, yard)?

21. What displeases you most about your private outdoor space (balcony, patio, yard)?

SECTION 7B: SEMI-PUBLIC SPACE

22. Do you live in a residence which has a semi-public area that is shared by residents in your building? (67)
- yes..... 1
- no..... 2- GO TO Q.26
23. In general how satisfied are you with the semi-public space near your building? Are you... (68)
- very satisfied..... 1
- somewhat satisfied..... 2
- somewhat dissatisfied..... 3
- very dissatisfied..... 4
- indifferent..... 5
24. What pleases you most about your semi-public space? (69)(70)
- _____
25. What displeases you most about your semi-public space? (71)(72)
- _____

SECTION 7C: PUBLIC SPACE

26. Does your home overlook a public area other than a street? (73)
- yes..... 1
- no..... 2- GO TO Q.30
27. In general, are you very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied with the public area you can see from your home? (74)
- very satisfied..... 1
- somewhat satisfied..... 2
- somewhat dissatisfied..... 3
- very dissatisfied..... 4
28. What pleases you most about your public space (pathway, courtyard, park)? (75)(76)
- _____
29. What displeases you most about your public space (pathway, courtyard, park)? (77)(78)
- _____

SECTION 8: PERSONAL EFFECTIVENESS

30. Which of these things, if any, have you ever tried to do to bring about changes on the Island?

	<u>Yes</u>	<u>No</u>	
- attend a meeting about a community problem.....	1	2	(79)
- sign a petition for some change.....	1	2	(80)
- organize or join an action group.....	1	2	(81)

31. Would you say that the city of Verdun's administration represents the interests of Nun's Island Residents very well, rather well, rather badly or very badly?

very well.....	1
rather well.....	2
rather badly.....	3
very badly.....	4

(82)

32. Are you in favor of Nuns' Island annexion to Montreal?

(83)

yes.....	1
no.....	2

SECTION 9: TRADE OFF

33. In general would you say that you are very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied with your neighbourhood?

(84)

very satisfied.....	1
somewhat satisfied.....	2
somewhat dissatisfied.....	3
very dissatisfied.....	4
indifferent.....	5

SECTION 10: PERSONAL CHARACTERISTICS

34. How many rooms does your home have? _____

(85)(86)

35. How many people are in your present household including yourself? _____

(87)(88)

36. Of these how many are:

65 or over: _____	(89)
18 years to 64: _____	(90)
between 10 and 17 years old: _____	(91)
less than 10 years old: _____	(92)

37. What is your occupation? _____

(93)(94)

38. How old are you?

(95)

18-24 years old.....	1
25-34 years old.....	2
35-44 years old.....	3
45-54 years old.....	4
55-64 years old.....	5
65 and older.....	6

39. Which of the following categories corresponds with the total income of your household before taxes?

(96)

less than 15 000\$.....	1
15 000\$ to 25 000\$.....	2
25 000\$ to 35 000\$.....	3
35 000\$ to 45 000\$.....	4
45 000\$ to 55 000\$.....	5
55 000\$ to 65 000\$.....	6
more than 65 000\$.....	7
refusal.....	9

40. Are you planning to move from your present home within the next year?

(97)

yes.....	1
no.....	2- GO TO Q.42

41. What is the main reason that you plan to move? (1 ANSWER)

(98)

cost of housing.....	1
high taxes.....	2
dislike environment on Nuns' Island..	3
wish to be homeowner.....	4
need better environment for children.	5
poor transportation on Nuns' Island..	6
other:_____	7
(specify)	

42. Finally there is another part to this questionnaire which offers a greater opportunity to tal, about Nuns' Island and the planning principles which might help guide further development.

Would you be willing to meet with one of our interviewers within the next couple of weeks?

(99)

yes.....	1
no.....	2

Where can we reach you to set up an appointment?

Name: _____ Tel.: _____

THANK YOU FOR YOUR COLLABORATION.

APPENDIX 2

Name: _____

Date: _____

Address: _____

Time: _____

Interviewer: _____

Detailed Resident Survey

Materials

2 blank sheets of paper 11 x 14
2 maps of island

3 coloured pens
1 pencil

Orientation:

We very much appreciated your help with the first questionnaire which dealt with some of the issues affecting residential quality on Nuns' Island. This second questionnaire is quite different from the first as it involves a few pencil and paper exercises which you may find interesting to do and several open ended questions which offer a greater opportunity for discussion than was possible with the telephone interview.

SECTION 1: PREVIOUS LIVING ENVIRONMENT

I WOULD LIKE TO START WITH A QUESTION WHICH WE DIDN'T HAVE TIME FOR IN THE TELEPHONE SURVEY.

1. Do you think of a particular dwelling as your childhood home?

- ___ yes GO TO 1a.
___ no GO TO 2

1a. What kind of house was it?

PROBE:

- house type
- ownership
- location

SECTION 2: IMAGE OF NUNS' ISLAND

NOW I WOULD LIKE TO DISCUSS NUNS' ISLAND AS A WHOLE.

2. Here is a sheet of paper and pencil. Would you please draw a sketch map of the Island which shows anything which is of interest or importance to you.
 3. When you think of Nuns' Island is there any particular landmark or symbol of the Island that comes to mind?
-
-

SECTION 3: IMMEDIATE OUTDOOR SPACE

I WOULD LIKE TO FOCUS NOW ON THE OUTDOOR ENVIRONMENT AROUND YOUR HOME.

4. What kind of outdoor space do you have? Do you have ...
 - ___ a private balcony
 - ___ a private patio
 - ___ a private yard
 - ___ a semi-public area
 - ___ or do you overlook a public area
5. Here is another piece of paper. Would you please draw a map showing the outdoor space around your building.
6. Would you tell me what you like and don't like about the outdoor space around your building?

PROBE:

Physical

- the size
- the amount of sun
- the level of noise
- the view
- the vegetation
- the wind protection
- the aesthetics

Social

- the privacy
 - * control over
- vandalism
- safety
- security

Type: _____

Lined area for writing.

Type: _____

Lined area for writing.

9. What types of activities do you usually do in the outdoor space?

9a. What activities do children do in the outdoor space?

PROBE:

- building access for children
- supervision

10. Is there anything which you would like to do in the outdoor space but can't or feel uncomfortable doing?

11. Have you done anything to change your (balcony, patio, yard)?

___ yes GO TO 12a.
___ no GO TO 13

PROBE:

-- plant hedge
-- build fence
-- install flower box

12a. what? _____

12b. how come? _____

13. Is there anything which you would like to do to change your (balcony, patio, yard)?

___ yes GO TO 13a
___ no GO TO 14

13a. what? _____

13b. how come? _____

14. Here is a map of your area. Do you have friends or acquaintances who live within the area shown on this map?

___ yes GO TO 14a
___ no GO TO 15

14a. Would you please indicate where your friends and acquaintances live. I going to use a red pen for friends and a blue pen for those who you know only by name.

SECTION 4: ACTIVITY PATTERN

15. Here is a map of Nuns' Island. Would you please indicate which places you visit at least once a month. We will use red pen for places you visit daily, blue for weekly visits and black for monthly visits.

15a. How do you usually get to these places? ("c" car; "w" walk; "t" public transport; "b" bike)

15b. Are there any areas of the Island which you have never visited?

15c. Are there any places where you don't feel welcome to go?

16. Now, here is another map of the Island. On this map would you please indicate your favourite walking routes and describe what you especially like about different places along each route.

PROBE:

- taking child to a park
- going to stores

SECTION 5: PLANNING ISSUES

17. How do you feel about the kind of development taking place on Nuns' Island?

PROBE:

- Is there anything good / bad about it?
- Do you think Nuns' Island would benefit if more people lived here?
- Should the pathways in the earlier development be continued?
- Are there any places on the Island which should be developed?

18. Some people have suggested different development concepts for the woods and golf course. For example, the Montreal Urban Community is studying the possibility of establishing some sort of public park in the woods area. What would you like to have there? How about ideas for the golf course?

woods _____

golf _____

19. How do you feel about the resident's ability to influence the way the Island is maintained and developed?

20. Are you a member of a local citizen's group?

___ yes GO TO 20a
___ no GO TO 21

20a. which one(s)

20b. how well does this group represent your interests

21. How involved do you think the residents of Nuns' Island should be in the development of the Island? Should they ...

- ☐ not bother
- ☐ rely on the City of Verdun to decide what is best
- ☐ rely on an architectural and planning review board appointed by residents and city administration
- ☐ rely on a committee of residents appointed by a citizen's group
- ☐ elect members of a development board"

why?

SECTION 6: IMAGE CLUSTERING

23. Finally, I would like to know something about your general impression of Nuns' Island. One technique which people have found useful involves clustering any words that come to mind about a particular topic. For example this cluster (show xerox) was made in response to the word "maze". Usually a cluster like this takes just a few minutes to do. Would you be willing to try a similar exercise using the words "Nuns' Island" as a starting point?

Here is a blank piece of paper and pencil. All that you need to do is write 'Nuns' Island' in the center of the page, draw a circle around it and then write any other words that you think of. Take as long as you want. I won't look at it until after you have finished.

THANK YOU FOR YOUR COLLABORATION

Comments: _____

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