

A CONSULTATION

PAPER ON

HOUSING QUALITY

**Canada Mortgage and Housing Corporation
1988**

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Consultation Paper on Housing Quality

1. Introduction

This paper is about the quality of Canadian housing. It will define the concept of housing quality, review the federal government's past involvement in housing quality, and will identify current issues. Its purpose is to act as the focus for a consultation on what should be done to address housing quality issues. Canada Mortgage and Housing Corporation will use the input from the consultation process in developing its future role in housing quality.

The quality of housing has a number of dimensions. In the narrower more conventional sense, it includes such attributes as:

- ° adequacy - the protection of the health and safety of the occupants;
- ° durability - the protection of health and safety for some minimum period of time;
- ° suitability/livability - the amount and arrangement of space within and around the dwelling.

In a broader sense, housing quality encompasses the environmental context for housing, and includes such attributes as:

- ° ease of access to employment and services
- ° the quality of neighbourhood dwellings

- ° the quality of air and water and absence of noise
- ° security from crime and risk of loss of property due to fire.

This paper considers both the physical and environmental aspects of housing quality.

The federal government has a concern about the quality of the housing stock because it is a national asset which is intrinsically linked to the quality of Canadian life and sense of "well being".

The federal government also wants to ensure that housing can be produced and operated at as low cost as possible so that all Canadians have reasonable access to it.

The basic issue to be addressed in this consultation, then, is how to achieve the right balance between a high quality of housing and reasonable access to it.

In the Consultation on Housing Renovation conducted by CMHC between the Spring of 1987 and Fall of 1988, issues with respect to the quality of the existing housing stock were addressed. These issues included poor consumer awareness of the need for proper maintenance and repair, low consumer confidence in the renovation industry, the need to develop specific codes for renovation purposes, and a need for research on topics such as the determinants of housing quality, neighbourhood dynamics, and declining urban neighbourhoods. The high incidence of substandard dwellings in rural areas was also addressed. The input received from the consultation process on housing renovation is helping CMHC to establish its role in renovation markets.

This Consultation will focus primarily on new housing. The quality of new housing has an impact on the quality of the whole housing stock in three ways - through additions to the stock to meet the needs of new household formation, through replacements of existing units, and through influencing the way that the existing stock is renovated.

The process of urbanization creates forces which impact on the quality of housing and the environment. For example higher land prices force economical use of land, reducing the amount of space available for living. High prices also bring about the construction of higher density housing, potentially leading to technical and social problems. Higher densities increase health hazards if water and sewage are not adequately treated. Noise levels increase with density and proximity to non-residential land uses. Opportunities for crime and the risk of the spread of fire may increase.

There are mechanisms in place to foster a minimum quality of housing and the environment. These include enforcement of building codes, zoning regulations, and the provision of publicly funded and managed infrastructure and services. For the most part, these mechanisms have been applied for the benefit of all Canadians. But the continued effort to maintain or improve the quality of housing in the face of even greater urbanization may raise the initial costs, and so restrict low and moderate income households' access to housing.

These are some of the keys issues to be addressed in this consultation process.

2. A Short History of the Federal Role in Housing Quality

Significant improvements have been achieved in the quality of the Canadian housing stock since the Second World War. Facilities and equipment have improved tremendously, and crowding has been virtually eliminated.

TABLE ONE
ADEQUACY OF HOUSING 1951-1981

<u>% of Dwellings</u>	<u>1951</u>	<u>1961</u>	<u>1971</u>	<u>1981</u>
- no piped hot and cold water	43.1	19.9	7.3	1.4
- no exclusive use of toilet	35.9	21.0	7.0	1.3
- no exclusive use of bath	43.2	22.9	5.0	1.0
- no central heating	-	29.1	17.3	9.3
- more than one person per room	18.8	16.5	9.5	2.5

Source: Census of Canada

While some of this improvement is attributable to an overall increase in real income, the role that the federal government played in preparing standards and goals; in financing basic services, new construction and repair; in promoting the improvement of planning and design; and in researching and demonstrating good practice cannot be ignored.

Development of Building Codes

The federal government has had an important role to play in housing quality by developing the National Building Code (NBC) as a model and adopting it in federal housing programs, notably public and non-profit housing and for National Housing Act loan insurance programs.

The forerunner of the National Housing Act (The Dominion Housing Act) was instituted in 1935. It enabled loans to be made for residential buildings constructed following sound construction standards. In 1946, Canada Mortgage and Housing Corporation (CMHC) was created to administer the NHA. Programs included loans for new housing and loans and subsidies for low rent housing. CMHC was required to review proposals for housing subdivisions to determine if adequate care was being exercised to ensure economical operation, suitable design and sound construction. CMHC could prescribe design, planning, and construction standards for its own purposes. During the 1950s, 1960s and into the 1970s, additional requirements were prepared to promote marketability and durability of NHA financed housing. These standards were enforced for NHA financed houses by CMHC's own inspectors. These residential development criteria became generally adopted by provinces and municipalities following CMHC's example. In recognition of the provinces and municipalities growing competence in residential development, CMHC relaxed these requirements for NHA market housing in 1980, although it retained them for government financed social housing.

Soon after its inception, CMHC began to offer advisory services to builders using NHA financing. In 1947, the first Builders Bulletin was issued, ostensibly for builders of NHA housing, but in reality available to all. In 1952, the CMHC office in Toronto offered a "plans review

service". In 1954, the "plans review services" were offered across the country. CMHC's advisory information to potential homeowners about how to choose a home and the provision of modest house designs were popular with consumers and builders. CMHC inspectors provided advice to builders about good construction practices when they visited construction sites.

During late 1950s and 1960s CMHC designed and built public housing in both high rise and ground oriented forms. These buildings established a standard for modest safe accommodation and remain in generally good condition today. When land costs rose during the 1970s CMHC supported the introduction of medium density housing through an incentive program and publication of many design documents focusing on liveability for families and seniors.

During the 1950s provincial and municipal governments became more involved and began to increase their expertise. Now most municipalities have a building code based on the National Building Code. There is reasonable conformity in these codes, although they have been modified to accommodate local circumstances. Most large urban municipalities have their own inspectors to enforce building codes.

Evaluation of Materials

The major benefit of a material evaluation service is to facilitate the use of new and innovative products. CMHC became involved in this activity in 1946 when it listed all materials considered acceptable for use in NHA supported construction.

Later, CMHC evaluated building materials, products, and systems to determine their conformity to other regulatory criteria, and published the results of such evaluations. CMHC tested many products new to the market and encouraged the development of standards when none existed.

Several provinces and other federal departments also established services for their own use. For many years CMHC advocated the establishment of one materials evaluation service to serve all construction industry needs, not just the residential component. Accordingly CMHC's service was recently transferred to the National Research Council as the Canada Construction Materials Centre. This national service will have the advantage of minimizing compliance costs and facilitating export/import of new housing products.

Community Planning

CMHC fostered the introduction of community planning in Canada by supporting planning schools and providing technical advice. Also the Community Planning Association of Canada was supported by CMHC to promote awareness of community planning issues. By the 1960s, most major municipalities had their own planning capability.

During the 1950s and 1960s CMHC also financially supported local urban renewal schemes. Substandard buildings in deteriorated neighbourhoods were demolished and replaced with new, low rent, residential structures. This policy was abandoned in 1969 because of the disruption it caused for the residents. A policy of neighbourhood improvement was instituted in its place which emphasized repair and

improvement of neighbourhood facilities and of the existing housing stock as well as development of the social infrastructure.

Between 1960 and 1980, CMHC assisted municipalities in the provision of sewage collection and disposal facilities, as well as water treatment and distribution systems. The initial concern was that the use of septic tanks in urban areas created a health hazard. Later the programs were used to encourage comprehensive land management and residential development in previously under-developed areas.

Research and Technological Change

The residential construction industry has adapted to technological change in an evolutionary manner. Such changes include the fabrication of components off site, the introduction of new materials such as plastic plumbing pipe, and the use of labor saving devices such as hand held power tools. Often, the initial idea for technological change came about through research, development, and demonstration sponsored by government, in particular research done under Part V of the NHA, by the Division of Building Research at the NRC, and by EMR. In the 1980s there has been a marked increase in the activities of various provincial agencies with a direct interest in technical research and development.

CMHC now supports workshops, in which results of research on good building practices are disseminated to contractors and to staff of other levels of government. The workshop material is developed by CMHC, and is delivered by Provincial Home Builders' Associations.

Consumer Education

The industry has played a major role in assuring consumers of the quality of housing they purchase. During the early 1970s, the home builders association in Alberta explored the concept of insuring individual home builder warranties. Momentum for the idea grew, and by 1977, there was a voluntary new home warranty program in nine provinces and a mandatory program in Ontario. These have protected consumer downpayments, and the quality of workmanship and materials used in construction. CMHC has supported these programs by requiring that new homes financed under the NHA be constructed by builders enrolled in a warranty program.

The provinces and municipalities also play a role in the area of quality assurance. Training for the subtrades is available through provincial education systems. Licensing of specific trades such as electricians and plumbers occurs in each province. Some municipalities and the province of Quebec licence contractors. Ontario requires all new home contractors to be covered by home warranty insurance.

Historically then, the federal government has played an important role in housing quality. However, many other institutions and sectors have become increasingly involved, and greater co-ordination and co-operation in dealing with housing quality issues is now very important.

3. Current Federal Activities in Housing Quality

The current federal role includes research, development, demonstration, standards development, product evaluation, inspections and advocacy.

Research, Development, Demonstration

Research, development and demonstration activities undertaken by CMHC and other federal agencies feed into the National Building Code, into standards generation, and into advisory documentation and information. Eventually the results of federal research influence housing quality in all parts of Canada. A National Housing Research Committee has been established by CMHC with representative from all sectors to identify research priorities and co-ordinate research efforts.

Standards Development

The Standards Council of Canada, a federal crown corporation, oversees and helps finance the activities of accredited standards writing, product testing and certification agencies. Accredited standards writing organizations include the Canadian General Standards Board, The Canadian Standards Association, the Canadian Gas Association, the Underwriters Laboratory of Canada, and the Bureau de Normalisation du Québec. The standards developed by these agencies are referenced in the various building codes.

Product Evaluation

The Canadian Construction Materials Centre within the National Research Council (NRC) makes its product evaluation results generally available to the public although specifiers, designers, and regulatory agents are the principal users of the information.

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Inspections

CMHC has established technical and environmental requirements for housing financed under the NHA to ensure the adequacy of its security. The environmental requirements are advisory for market housing. Currently, less than 20 per cent of all new housing is NHA financed (Table Two), so that CMHC's influence over housing quality by this means is less than in earlier years.

**TABLE TWO
CMHC DIRECT AND APPROVED LENDER STARTS RELATED TO
TOTAL STARTS 1946-1987**

PERIOD	000's OF UNITS				% NHA
	CMHC	APPROVED LENDER	TOTAL NHA	TOTAL STARTS	
1946-1949	19.0	65.2	84.2	320.0	26.3
1950-1959	122.6	373.6	496.2	1 154.1	43.0
1960-1969	268.3	302.1	570.4	1 551.5	36.8
1970-1979	303.1	694.4	997.5	2 339.8	42.6
1980-1987	12.4	227.7	240.1	1 371.6	17.5

Source: Statistical Services Division, CMHC.

Advocacy

CMHC has promoted improvements to housing quality by demonstrating and advocating Corporate views on good housing design and construction. Recently CMHC has targeted advocacy initiatives to specific interest groups, such as the Canadian Home Builders Association, the Federation of Canadian Municipalities and the Canadian Housing and

Renewal Association, and worked jointly with them in bringing about solutions to specific problems. CMHC continues to be an active participant on many codes and standards committees. In addition, CMHC encourages the improvement of housing quality by recognizing the achievements of others through such programs as the housing awards program and the job-site innovation program.

4. Are Canadians satisfied with the quality of housing they have?

Studies have continually revealed high levels of consumer satisfaction with their housing. One of first comprehensive studies was undertaken in 1969 by William Michelson, who examined 761 families who were about to move. His findings demonstrate that overwhelmingly, families were satisfied with their new homes four years after their moves.

**TABLE THREE
FEELINGS ABOUT THE NEW HOME BY HOUSING TYPE AND LOCATION**

Housing type and location	Definitely Satisfied	Mostly Satisfied	Not Satisfied	Mostly Disatisfied	Definitely Disatisfied
Apt. Downtown	20.4	64.8	11.1	1.9	1.9
House Downtown	54.8	42.9	0	2.4	0
Apt. Suburbs	26.8	56.9	12.4	2.6	1.3
House Suburbs	50.6	45.7	3.1	0	.6

He obtained similar results for feelings about location and neighbourhood. With respect to the sources of satisfaction/dissatisfaction, apartment dwellers were most concerned about the lack of size and flexibility in their housing, while single family households expressed some concern about

the quality of construction, specifically concerning inside and outside noise transmission.

A 1973 study by Hamilton and Roberts for condominiums in the Greater Vancouver area found that over 93 per cent were either moderately or very well satisfied. The most frequent reasons for dissatisfaction were noise, lack of privacy, and uncontrolled children. A 1973 study by Homenuck found that high rise housing was not particularly well suited for families and for certain classes of senior citizens.

A 1979 study by CMHC provided further evidence in support of the proposition that households are generally satisfied with their housing. Satisfaction levels were highest for owners of detached units followed by owners of units in low rise projects. These groups were followed by renters of high rise units and their renters of detached units.

A Consumer and Corporate Affairs survey of consumer housing satisfaction done on 1033 households in 1979, also suggested that households are generally quite satisfied with their purchases.

TABLE FOUR
SATISFACTION WITH HOUSING BY HOUSING TYPE

<u>Housing Type</u>	<u>Households Buying in last 3 years</u>	<u>Households Little or Very Dissatisfied</u>
Single family or Duplex	190	15 (7.9%)
Condominium or Co-operative	15	2 (13.3%)
Mobile House	25	5 (20.0%)

Source: Consumer and Corporate Affairs.

A study prepared by Statistics Canada in 1980 revealed that Canadians were as satisfied with housing and neighbourhood as with their life as a whole. Levels of overall satisfaction with life have increased over time, and compared favourably with levels of satisfaction in selected European countries, being lower than Denmark, Ireland, and Belgium but higher than five other countries included in the study.

A survey conducted by Decima Research for CMHC done in the summer of 1988 probed Canadians views on housing issues. Fewer respondents considered housing to be a problem than those who considered crime, environmental issues, free trade, abortion or unemployment to be problems. Of those who did rate housing as a problem, concerns about the quality of community services, distance to work, quality of the homes in the neighbourhood, and services in new subdivisions, were lower than concerns about availability of affordable housing.

It is tempting to use these results as an argument to de-emphasize concern for housing quality. However, it would be equally valid to claim that continuing collective efforts of governments and others to improve housing quality are the reason for such satisfaction being expressed by Canadians. Relaxation of concern could lead to a deterioration of satisfaction levels, since the urban scene is changing continuously.

5. Housing Quality Issues in Canada

Housing quality includes protection of health and safety, durability, suitability, neighbourhood, and local services. There are strong arguments which relate these facets of

housing quality to quality of life, which will be reviewed in the following sections. There are mechanisms in place to advance these aspects of housing quality. Their advantages and disadvantages will also be reviewed.

Finally, there are short term costs to improving each aspect of housing quality. These will be identified, along with the implication for access to housing and housing affordability.

Health and Safety/Durability/Building Codes

A house is a complex system which few consumers fully comprehend because they are able to observe only the walls, roofs, and floors. Much of the construction detail is hidden from view. Therefore consumers have no way of judging the structural and insulation aspects of the house they are purchasing. Further, some consumers might purchase substandard housing because they are unaware of the benefits of a house meeting minimum health and safety standards or are unwilling to pay the price for a house meeting such standards.

Local building codes and their enforcement address these problems by assuring that the house purchased meets minimum standards. Thus the consumer's investment in the building is protected from structural problems and he does not make purchases which represent a risk to health, safety and financial well being.

While most new construction is located in jurisdictions which have adopted a building code, building codes are not uniformly enforced in all locations. This is especially so in rural areas, as reflected by the high incidence of substandard dwellings there.

The building codes in Canada are still essentially prescriptive in nature, in that requirements are mainly defined by describing proven construction and engineering practices for currently used construction systems and mechanical equipment. The advantage of this approach is that it provides designers and builders with a very clear picture of what is acceptable. It is also easy for code enforcement officials to administer. Although all codes provide for the acceptance of "equivalents", designers who wish to introduce new technology are faced with the complex task of having to prove that their system performs at least as well as a system prescribed in the Code. This can be a major deterrent to the introduction of new technology.

There is variation in building code and standards among individual provinces and municipalities. This non-standardization may be a contributing factor to the fragmentation of the building industry, the loss of economies of scale, and higher housing costs.

Rising land costs have prompted high rise developments and modifications to building design. These relatively new construction techniques in turn may create health, safety and durability problems. For example, concrete is used extensively in high rise residential construction as basic structure, as flooring, and for balconies and other exposed structures or facings. There is evidence that concrete structures are not lasting as long as intended due to corrosion by acid rain and salt.

Rising energy prices have led to increased tightness in low rise buildings to improve energy efficiency and reduce operating costs. Air quality and structural problems can result if there is inadequate ventilation. For example,

high humidity levels can generate biological pollutants and cause structural deterioration, combustion products can spill into the indoor air, and hazardous gases emanating from the ground and from building materials can accumulate.

The relationship between improved quality of construction and long term operating and maintenance cost savings are not fully understood. Hence housing quality regulators have no basis for justifying increased housing quality and builders/consumers do not have the necessary information to judge whether the benefits of improved quality exceed the higher costs. The changes in housing design and materials necessary to reduce the life cycle cost of housing may lead to higher initial cost, and so restrict access to housing by low and moderate income families.

Fundamental questions have to be asked. Should the current system of code development and enforcement be improved either through adoption of one universal national building code, or perhaps a separate code for residential structures. Should alternative approaches such as performance codes be developed. Is housing an industry where the notion of warranty has the possibility of succeeding? Should more resources be spent on identification of problems and research on solutions? Should government promote improvements in housing quality intended to reduce life-cycle costs, or should it focus its research on affordability?

Suitability/Site Plans

Housing quality can also be judged according to the amount and usefulness of space provided both within the dwelling and surrounding the dwellings. Space is needed to protect privacy, to store possessions, to ensure access to natural light, to act as insulation from noise, and for outdoor living purposes. The process of urbanization creates a premium on space, and forces the housing market to economize on its use. It has been suggested that lack of space, and the privacy, quiet, light, and social/recreational play opportunities that go with it can cause stress and emotional problems. These in turn may lead to poor social development in children and anti-social behavior in adults.

Space within and around dwellings are set by building and zoning standards. But requiring minimum room sizes, and space among and between buildings and streets, in the interest of avoiding the social cost of urbanization, increases the costs of housing, with the result that low and moderate income households are excluded from the better quality housing or have to pay too much of their income for the housing they have.

Thus balance must be achieved between continuing support for minimum residential space requirements, in order to improve the quality of life, and allowing higher densities in both existing and new urban residential developments, in order to improve access to a minimum quality of housing.

Neighbourhood Quality/Development Controls

Neighbourhood quality is affected by the degree of separation of dwellings from commercial and industrial

activities and the degree to which surrounding buildings and infrastructure are compatible aesthetically. Neighbourhood quality is also affected by the ease of access to retail facilities, employment, health and social services. Neighbourhood quality has an impact on all property values in the neighbourhood.

An unrestricted land market may not properly segregate incompatible land uses nor ensure ready access to services. Further, uncontrolled developments may be poorly designed, imposing high servicing costs on the municipality and harming the environment. Consequently municipalities establish plans which attempt to ensure compatibility of land uses and to seek the most economical use of the land. Land development proposals may also have to meet the environmental concerns of the community.

The planning/approval processes are often blamed for increasing the cost of housing because of the extra time they add to the development process, and the uncertainty created for the developer. It has also been claimed that the development standards are too high, excluding certain types of housing from neighbourhoods, restricting housing choice and limiting access to affordable housing for low and moderate income households.

The question must be asked whether the planning and approval processes should/could be streamlined. Further, should the zoning and subdivision standards be more flexible to allow more varied housing forms and improve access to housing.

Can this be done without jeopardizing homeowner concerns over maintenance of property values? Are present zoning instruments and mechanisms effective in achieving intended results with respect to housing quality, or are there better mechanisms? Should zoning be abandoned altogether in favour of a more "laissez-faire" approach to land development?

Community Needs/Facilities

Within an urban environment, water treatment and distribution systems, sewage collection and treatment facilities, police protection and fire protection services, and recreational and social facilities must be provided. These are intrinsic to the quality of housing services and the quality of life in urban areas.

Municipalities have expressed concern that they are unable to maintain existing services and facilities. They say that there is a 15 billion dollar back-log of needed repairs. Municipalities claim that their main source of revenue, the property tax, is regressive, and that they have no room to raise taxes or debt in order to finance such services. This will impact on their provision of services and facilities in new developments also.

As with housing standards, individual local governments determine standards for the provision of services. These standards in some cases are too high, or are poorly designed. The result is a higher cost of housing and exclusion of poor and moderate income households.

Buildings can be designed to offset the risk of fire spreading from building to building and within a building. The fire code and many standards enforce this. Buildings can also be designed to reduce opportunity for crime. However, the costs and effectiveness of these techniques compared to the alternatives of direct provision of services are unknown.

The issue, therefore is how should the federal government address its concern that people have access to adequate local services? Does it have a role to play in ensuring more effective research and providing advice on infrastructure and building design and service provision?

6. Conclusion

The desirability of changes to the current way of improving/maintaining housing quality relates to the potential of these changes to better fulfill society's objectives.

The existing system of maintaining housing quality relies on many actors - all three levels of government, the private industry, and the consumer. Changes to improve housing quality many simply involve improvements to the existing way of doing things - ensuring there is a skilled and responsible housing industry, an appropriate regulatory framework, an informed public, a competent quality assurance mechanism, and appropriate research and information transfer mechanisms. Alternatives can be considered, however, which may better fulfil our objectives - either in terms of better housing quality or in terms of improved access to housing.

These may require greater public influence; for example a shift from prescriptive building standards to performance standards. Or it may require greater reliance on the market; for example, relaxation of building codes in favor of mandatory contractor warranties.

Are we satisfied with the quality of housing that we are now getting? Are we satisfied with the degree of access that Canadians have to good quality housing? What is the appropriate balance between these two fundamental objectives? What can CMHC do to support these objectives?

Please comment on these and any other issues which you feel are relevant to the question of housing quality.

Submit your briefs to:

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