Wells Coates (1895-1958) was among the first architects to introduce the International Style to Britain in the 1930s, but he received few commissions in England after the Second World War, and so gradually shifted the focus of his work from Britain to Canada, the country of his parents' birth. In his opinion, this country was on the verge of architectural maturity: "Canada may be the birthplace of a 'new classical era' in architecture," he proclaimed in a 1952 lecture to the Community Planning Association in Vancouver. This classical era, asserted Coates, would necessarily be predicated on the widespread acceptance of Modern architecture. And Modern architecture, he explained, "requires more than isolated buildings; to reach its full social responsibility and potentiality it requires coordinated planning. ... Here in Canada such a thing is possible."

In Canada, Wells Coates hoped to regain to his pre-war status as a prominent promoter and designer of Modern architecture. His blood ties, coupled with his background as a leader of the Modern Movement in England, seemingly made him the ideal candidate to become the guru of Modernism in Canada. But Canada never embraced his work; his post-war practice here, much like in England, consisted largely of a series of unexecuted projects.

Figure 1. Plan for the redevelopment of Toronto Island prepared by architect Wells Coates in 1954. (Collection Centre Canadien d'Architecture | Canadian Centre for Architecture, Montréal)

1 The extensive reports, notes, and sketches in the Wells Coates Archives (hereafter WCA) at the Canadian Centre for Architecture, Montreal, were the principal research source for this article. My preliminary thoughts on this subject were presented in a paper, "Wells Coates' Canadian Projects: Experiments in the Development of the Modern City," at the SSAC conference in June 1994.

2 "Canadian Architecture Praised," Vancouver Daily Province 8 October 1952. WCA.

3 Ibid.

BY ELSPETH COWELL
Coates first sought work in Canada during a visit to Montréal in July 1951. With his partner Jacqueline Tyrwhitt and Canadian architect C.B.K. Van Norman, he met with the vice-president of Alcan to discuss a proposal for the soon-to-be-developed single-industry community of Kitmat, British Columbia. This overture was unsuccessful, though Coates continued to seek some level of involvement in the development of Kitmat until at least March 1952. More promising was his appointment as planning consultant to the Iroquois, Ontario, municipal council in September 1952. The old townsite of Iroquois was to be flooded during the construction of the St. Lawrence Seaway, and council hired Coates to prepare the master plan for a new relocated community. He continued to work on his ambitious plan for the Iroquois New Town until October 1954 when, for a combination of political and practical reasons, another architect, Kent Baker, was chosen to complete the design for the new town.

In early 1954, probably while still working on the Iroquois New Town, Coates in association with John C. Parkin* initiated a Toronto Island redevelopment project which focused on increasing the housing density and updating the island’s housing stock and recreational facilities. Coates may have seen the Iroquois New Town and Toronto Island projects as interrelated: the housing that he proposed for Toronto Island consisted primarily of “Room Units,” prefabricated housing units of his own design; in his plans for Iroquois New Town, he not only incorporated Room Unit housing, but also promoted the inclusion of a factory for manufacturing Room Units as part of the town’s industrial base.

The Toronto Island project was not executed, nor were other ill-fated projects which followed: proposals for apartments in Ottawa (1955) and Vancouver (1957); a mass transit system (1957) for Vancouver; and Project ’58, an urban plan for downtown and West End Vancouver. Coates died in Vancouver on 17 June 1958, never achieving the prominence in Canada he felt he deserved. Nevertheless, his Toronto Island project represents a notable exercise in the comprehensive application of Modern urban planning theory and architectural design.

TORONTO ISLAND

Coates’ proposal for the group of islands fronting Toronto Harbour (commonly called “Toronto Island” collectively) (figure 1) was not developed in isolation, but was part of an ongoing discussion on the islands’ future and was grounded on local input.7 While no evidence has been found to suggest that Wells Coates had any direct involvement in the debate concerning Toronto Island’s development, he was clearly aware of the controversy.

From 1947, the city of Toronto began to take an active interest in “modernizing” Toronto Island. Each of their successive planning proposals was strongly opposed by the islands’ residents. The city’s plans focused on three objectives: improving the islands’ accessibility by constructing a tunnel connecting them to the mainland; increasing the tax base of the islands by replacing the existing housing with multi-storied luxury apartment buildings and hotels; and attracting more Torontonians to the islands by improving the recreational facilities. The islands’ residents fought to maintain the status-quo, an automobile-free environment and a small population (approximately 2,000 year-round residents in 1951)8 living in winterized frame cottages. The residents would endorse only changes that improved their quality of life, such as raising the level of land to prevent flooding or constructing new recreational facilities.

The city’s long-term plan of 1947 set the general direction for all their subsequent proposals (figure 2). The harbour side of the islands would be used for parkland and recreational facilities. The lake side of the islands would be developed with high-density housing and hotels fronted by beaches. In some plans, two of the smaller islands on the harbour side, Algonquin and Ward’s islands, continued to be occupied by individual houses. Transportation centred on a wide highway which swept across the islands and connected them to the mainland by a tunnel to be located adjacent to the existing airport. This road would supplement the existing ferries. Several plans also suggested a drawbridge over the Eastern Channel. Extensive parking for visitors (up to 9,000 cars) was also a recurring feature.

Wells Coates’ report for his redevelopment project referred to various proposals by the city of Toronto, and these proposals served as a starting point for his scheme. In essence, Coates combined the city’s proposal of 1951 (figure 3) and the island residents’ proposal of 1953 (figure 4): the layout of roads (with a tunnel under the Western Channel) and zoning of facilities were adopted directly from the city’s plan, but Coates maintained the natural topography of the islands evident in residents’ plan.

5 Wells Coates to McNeely Dubose, Alcan vice-president, 2 March 1952. WCA.
6 Wells Coates, “Memorandum on a proposed site development in Toronto, Ontario, Canada ... March 15, 1954,” 3. WCA. The nature of this association is unclear.
7 The background information on the redevelopment of Toronto Island and the accompanying controversy is based on two sources: Toronto’s Island Park Neighbourhoods (Toronto: City of Toronto Planning Board, 1973), and Sally Gibson, More Than an Island: A History of the Toronto Island (Toronto: Irwin, 1984), 225-235.
8 Toronto’s Island Park Neighbourhoods (Toronto: City of Toronto Planning Board, 1973), 2.3.
Figure 2. Long-term proposal for the redevelopment of Toronto Island developed by the City of Toronto Planning Board in 1947. (Toronto's Island Park Neighbourhoods [Toronto: City of Toronto Planning Board, 1973], fig. 5)

Figure 3. Suggested development of Toronto Island prepared by the City of Toronto Planning Board and the Toronto Harbour Commission, 1951. (Toronto's Island Park Neighbourhoods [Toronto: City of Toronto Planning Board, 1973], fig. 6)

Figure 4. Residents' plan for the redevelopment of Toronto Island, prepared by Toronto Island residents in 1953. (Toronto's Island Park Neighbourhoods [Toronto: City of Toronto Planning Board, 1973], fig. 7)
Coates then moved beyond the synthesis of existing proposals with his arrangement of the housing, which was considered in more detail than in previous local plans. In his proposal, the housing on Centre Island and Algonquin Island consisted of widely spaced high-rise apartment blocks situated in park-like setting—an arrangement obviously inspired by Le Corbusier's urban projects. Individual houses strung along curving roadways were to be constructed on Ward's Island. These dwellings were probably intended to accommodate existing island residents. Coates clearly stated in his report that all residents wishing to remain on the islands would be rehoused. Further, given the residents' hostility to high-rise, multiple-unit development, their new housing would presumably be low-rise, single-family dwellings. Coates' new housing—single-family and high-rise—on Toronto Island would increase the overall population from 3,000 to approximately 10,000. The other buildings shown on Coates' plan, in spite of the precision of their forms, do not represent specific buildings proposed by Coates. These outlines are simply formal indicators of the architectural character of the buildings that he hoped to design for the islands, and of the density and placement of development. Once again, the parallel to Le Corbusier's work is clear, especially in the comparison of Coates' plan to Le Corbusier's plan for Saint-Dié (figure 5).

Both architects utilized schematic building outlines in their urban plans to indicate only the proposed character (always Modern) and placement of structures. Coates' comprehensive application of modern urban planning theory and architectural design distinguishes his proposal from the projects prepared by local planners. Coates developed his proposal with the intention of promoting his vision of a modern community (and obtaining a commission to design the final redevelopment plan for Toronto Island). Coates' position on the creation of modern communities was based on two central concepts: the development and use of industrialized housing; and the application of the ideas of modern planning as set out by the Athens Charter of the Congrès International d'Architecture Moderne (CIAM), most importantly the rationalized zoning and controlled growth achieved through public control of urban land.

**HOUSING**

The merit of Coates' Toronto Island project undoubtedly centred on the development of the housing. He opened his report on the project by stating that its raison d'être was "a proposed site development in Toronto, Ontario, Canada for the exploitation of Room Unit Developments in high-block apartment dwellings, and for other buildings." The report explained that Toronto Island was an ideal location, based on the

---

10 Ibid., 1.
proximity to downtown Toronto and absence of land ownership problems, to explore the potential of high-rise apartment blocks as a solution to Canada’s housing crisis.14 Taking advantage of the unique leasehold arrangement on the island (all land was leased to the residents, rather than owned), Coates hoped a British-Canadian12 developer could be attracted who would, with the cooperation of the city, build a modern community to his designs. The scheme was predicated on the city of Toronto’s willingness to lease all the land after the expiry of existing leaseholds in 1968 to a financially secure developer, who would develop the entire project within the city’s guidelines. Coates implied in his report that he had already undertaken some discussion regarding this arrangement with city officials.13

Under this plan, most of the recreational spaces would be let to contractors for development, allowing Coates and his chosen developer to concentrate on the shopping, theatre, and cinema facilities, and, most importantly, the housing. A system of prefabricated housing, his “Room Unit Production” system, would be used for the high-rise apartment houses and other comparable buildings such as hotels.

Coates began to develop this system in 1947 as a solution to the English post-war housing crisis. The prefabricated Room Units took advantage of the economies to be gained by industrialization and standardization, but at the same time were flexible enough to adapt to a range of accommodation requirements. The concept built on Coates’ prior experience with prefabricated houses, the Sunspan system of 1934,14 the preliminary development for the post-war AIROH temporary houses in England,15 and low-cost native housing for South America (c. 1945, unexecuted).

Coates’ approach to housing design was based on his belief that “every living person is qualified, by right, to possess a decent home.”16 This right, according to Coates, could only be achieved by developing cost-effective prefabricated housing. Like L’E Corbusier, he compared the manufacturing of prefabricated housing to the automobile production line in order to illustrate how the industrialization of house construction would lead to cheaper and better houses. While the cost of setting up a production line, and therefore of the first mass-produced car (or house), was high, the economies of scale possible in a factory would rapidly reduce the cost; the more products manufactured, the lower the cost per unit.

Coates developed Room Unit Production as a prototypical system for apply-

Figure 6. Floor plans for typical Room Units designed by Wells Coates. (Collection Centre Canadien d’Architecture / Canadian Centre for Architecture, Montréal)

12 This arrangement is reminiscent of Coates’ attempts to involve British industry in the development of Iroquois New Town and to attract British immigrants.
14 Approximately 15 of these houses were constructed by developers in England. Cantacuzino, 22.
15 This work included a comprehensive report entitled “Memorandum on the preparation of a programme of Research and Development of Ready-made Dwelling Units & Assemblies for Post-war Reconstruction & Housing,” 22 March 1944. WCA.
ing prefabrication to house construction. The Room Units were designed to be used in two arrangements, in single-family houses called “Rooms in a Garden,” and in multi-storey slab blocks up to ten storeys high called “Rooms into Frame.” The high-rise blocks were initially to be used for apartments and hotels, although Coates hoped eventually to expand the system for use as hospitals, offices, and schools.

The system (figure 6) consisted of insulated, low-pressure laminate housing units each divided transversely by a spine member into two spaces, an equipment unit and a main living area. The equipment unit, the smaller part of the housing unit, contained all the spaces that required plumbing and other services such as bathrooms and kitchens, as well as other small rooms, including dressing rooms and entrance halls. The larger living part of the unit was arranged as a living room, bedrooms, or other major living space as the owner wished. A complete apartment or house was created by joining two or more of these housing units.

The prefabricated room units (figure 7) were to be shipped by truck to the site, hoisted into a prestressed, precast reinforced concrete frame using a gantry attached to the frame (or placed on a foundation in the case of “Rooms in a Garden”), and attached to each other to form a housing unit with a narrow link unit (see figure 6) and to the main services of the building. Economical construction would result from minimizing on-site labour and maximizing factory prefabrication.

This first iteration of the “Room into Frame” was to be used for the Saint Lawrence Cliffs Hotel in Thanet, Kent, in 1946 (figure 8). This proposal and its companion project for “Rooms in a Garden” were not executed, but Coates, convinced of the system’s viability, continued to develop it. He subsequently came to an arrangement with Hawkesley Limited, an aircraft manufacturer, to replace the ARCH houses (not designed by Coates) then on their production line with the Room Unit Production system. This arrangement also fell through, leading Coates to attempt to develop the system privately. Yet, in spite of his extensive promotion of the system, no Room Unit buildings were ever constructed. By 1953 Coates had begun to redesign the system in light of criticism that the equipment units were cramped, the structure and aesthetics were unresolved, transportation was expensive, and, ironically (as flexibility had always been a central concern), that the living spaces were inflexible. The original system changed dramatically, and the Room Units were figuratively taken apart. The equipment units continued to be prefabricated, and therefore took advantage of the economies of scale and the efficiency of the assembly line for this functionally more complex part of the unit. But the rest of the unit was to be shipped as a flat “kit of parts” package and assembled on site, allowing more flexibility in arranging living spaces and creating lower transportation costs. It was this redesigned system that Coates intended to develop in Canada. Although the system’s physical configuration and construction was significantly altered between 1947 and 1954, the external appearance of the buildings for Toronto Island would probably have remained virtually unchanged from the Saint Lawrence Cliffs Hotel.

The new system also permitted Coates to explore the possibility of “Three-Two” Room Units. This sectional configuration combined one-and-one-half storey living rooms with regular-height bedrooms and service areas to create apartments with more varied spaces than a standard flats, but without wasting cubic area. Coates developed two Room Unit proposals related to this concept. Both proposals apparently

17 Coates probably hoped to use these for the single-family houses on Ward’s Island.
18 These criticisms are outlined in Wells Coates, “Room Unit Production: Summary of Conclusions From Recent Analysis,” n.d. (c. 1950). WCA.
19 No drawings specifically for the housing on Toronto Island are known to exist.
reverted, with the exception of the continued use of prefabricated equipment units, to conventional construction methods rather than modules in a frame. Although the plans give no indication of the construction methods to be used, Coates probably intended to develop a prefabricated system for the Three-Two Room Unit system. This possibility is reinforced by Coates' suggestion in a report relating to Iroquois New Town that the Room Unit Production factory there would produce precast building elements, floor slabs, staircase units, and long-span beams.

The first proposal for Three-Two Room Units (figure 9) maintained some of the rationalized layout of the conventional one-level Room Units. The equipment units were positioned in rows and stacked one above another, providing for economical mechanical and plumbing connections. In the second proposal, the equipment units "floated" freely within the living units with little consideration, either in plan or section, for their relationship to each another. It is possible that the spatial advantages of the Three-Two Room Unit—which, like the Room Unit Production system, was a pet project of Coates—would ultimately outweigh the economic advantages of the original one-level Room Unit system.

Conceptually, the Room Unit Production system has strong associations with other modern housing systems. The most striking parallel is with Le Corbusier's Unité d'Habitation (1947-52). Both architects conceived their systems as a series of self-contained living units inserted into a multi-storey framework (figure 10). Le Corbusier described the underlying concept of these systems by comparing the principle used for the Unité to bottles in a wine rack. As with the Room Units, the possibility of factory-produced Unité units was initially explored, but the final units—prefabricated panels...
on a steel frame—were constructed in situ. Although site-built, the units continued to be physically independent of the building's structural frame. In his later Room Units schemes, Coates also acknowledged the problems of prefabricating modules and adopted a panel system. As the Coates and Le Corbusier systems were developed concurrently, it is unclear if Coates was influenced by the Unité d'Habitation. Earlier projects by Le Corbusier such as the Immeuble Villa, which involved the same, although less developed, principles of frame and apartment module, may have provided the initial inspiration for Coates.

Other contemporary projects may have influenced Coates in the design of the Room Units. For instance, the equipment units are akin to the prefabricated bathrooms and kitchens developed by Ralph Rapson, William Wilson Wurster, and R. Buckminster Fuller, published in F.R.S. Yorke's *The Modern House* in 1943. These parallels with contemporaneous developments in the Modern Movement are typical of Coates' work to the extent that it is often difficult to establish which were Coates' own ideas and which were "borrowed." Coates had a keen ability to assimilate the ideas of others into his modern repertoire. This absorption of external influences is especially evident in the relationship of his work to the ideas of Le Corbusier. Coates' theoretical writings echo, and at times virtually quote, Le Corbusier's writings, and a number of his buildings make direct visual references to Le Corbusier's projects and built works.

The ambiguity of Coates' sources is a byproduct of his design methodology. Coates approached most projects by trying to determine the essence of the problem to be solved, then analyzing all the problem's facets before developing a final solution. This approach often led to solutions that seemingly imitated the work of other architects, yet were in fact derived from original thought. In other cases, the starting point of Coates' design process was a concept devised by another designer which he would appropriate and develop more fully. The Three-Two section for apartments is an excellent example of this type of appropriation. Coates seized the concept of planning living spaces in section which had originally been developed by Moses Ginzburg for the Russian F-type housing and by Hans Scharoun for an apartment building at the Breslau Werkbund exhibition, then thoroughly explored the concept over a 20-year period for all its possible spatial configurations.

**URBAN PLANNING**

Coates' urban planning ideas were more derivative in concept and final form than his housing designs. His urban design philosophy and projects were based on the typology of Le Corbusier's post-war urban work and the theoretical ideas on the development of cities outlined in Le Corbusier's version of the CIAM Athens Charter. The Room Unit slab blocks on Toronto Island were to be arranged in staggered rows, mirroring the arrangement of the Unité d'Habitation blocks proposed by Le Corbusier for a number of projects, including Bogota (1950) (figure 11). Saint-Dié
suggestion would ultimately lead to the abolition of private property. Coates' writings
pragmatically, for all Coates' enthusiasm for the suppression of private property rights and his
attachment to urbanism placed particular emphasis on this issue.

In Coates' 1927 report of the City of Toronto, he stated
that "the whole of the land is owned by the Corporation of
Toronto Island-already entirely publicly owned—would, therefore, be an
ideal place to create a prototype for the planned community of the future. Paradoxi-
cally, for all Coates' enthusiasm for the suppression of private property rights and his
condemnation of developers, his plan for Toronto Island was dependent on the recruit-
ment of a private developer. He must have drawn a very fine distinction between
developers in general and developers who were willing to build his ideas. In his
Toronto Island report he stated "the whole of the land is owned by the Corporation of
the City of Toronto, and is available on leasehold to developers willing to take on the
whole project." This conclusion is substantiated by his previous
involvement with developers, especially Randall Bell, the developer involved in several of his
English projects and, initially, Iroquois New Town.

An often overlooked aspect of the Athens Charter is relevant to the redevelopment
of Toronto Island (and to the development of modern Canadian communities in
general): the need to consider the natural attributes of the site in planning its development.
Tenet 86 of the Athens Charter declares that the urban plan "must gather into a
fruitful harmony the natural resources of the site, the topography of the whole area, the
economic facts, the sociological needs and the spiritual values." Coates echoed this

Although Coates was apparently heavily influenced by Le Corbusier's pro-
jects, his understanding of the underlying principles, namely the Athens Charter,
make it clear that Coates was not merely a copyist, but rather an adherent and pro-
moter of modern community planning. Coates' modern communities served not only
as palettes for modern buildings, but were also intended to be socially progressive
identities which would affirm the values of a new age.

25 Coates, "Conditions for an Architecture for

26 See especially Coates, "Conditions for an Architecture for To-day," and "Planning in Section," The
27 Coates, "Conditions for an Architecture for To-day," 450.
28 Ibid., 452.
29 This conclusion is substantiated by his previous
involvement with developers, especially Randall Bell, the developer involved in several of his
English projects and, initially, Iroquois New Town.
31 "Charter of Athens," in Conrads, 142.
sentiment in his aforementioned 1952 lecture to the Community Planning Association in Vancouver, when he emphasized that “Towns must be designed to blend with and enhance the natural beauty of the landscape.” In his Toronto Island proposal, Coates preserved most of the natural topography of the islands and waterways, whereas the city of Toronto plan indicated that many of the waterways were to be filled (see figure 4). On the Coates plan, most of the buildings are shown in outline only, but green (for vegetation) and blue (for water) colouring were added to emphasize the significant presence of nature for the islands. Further, like many other Modernists, Coates may have considered the stark technological beauty of Modern architecture as an counterbalance, and consequently an enhancement for the intricate beauty of nature.

While the “Classical Era” that Coates predicted in his 1952 lecture in Vancouver never emerged, Canadian post-war architects did embrace International Style modernism as the style of choice. High-rise apartments of the form (though not the fabrication) proposed by Coates for Toronto Island soon began to sprout up across the country: the Benvenuto Place Apartment-Hotel, designed by Peter Dickinson (a former employee of Coates) and constructed in 1955, was among the first apartment buildings to adopt the International Style in Toronto; the Ocean Towers, designed by Rix Reinecke and constructed in 1958, was the first high-rise apartment building in downtown Vancouver’s West End. While Coates would have approved of the modern packaging of these and other contemporary apartment buildings, he was probably dismayed at their propitiation of a piecemeal, “postage-stamp” approach to development. Housing developments in Canada rarely incorporated high-rises, with the exception of several publicly sponsored superblock housing complexes, including Regent Park South in Toronto (1957), Jeanne-Mance in Montréal (1958), and McLean Park in Vancouver (1962-63, 1968-70).

Likewise, most post-war planned communities in Canada did not unconditionally embrace Modernism. The new communities of Kitmat, British Columbia, and Don Mills, Ontario, both begun in 1952, are prime examples, each a blend of Modern architecture and Garden City-inspired planning. Coates himself adopted this approach for his proposed Iroquois New Town. The Toronto Island project differed from these projects in its comprehensive and unconditional application of Modern architectural design and urban planning theory. Coates took advantage of the unique circumstances afforded by the project, notably its lack of an industrial component, to downplay industry or “work,” as well as traffic, the two less-desirable of the four zoning categories described in the Athens Charter. He thus created an idealized living environment where leisure and entertainment were paramount. His objectives in redesigning this community are clear: he intended Toronto Island to showcase his Room Units housing blocks as a model housing form of the future for Canada, and his urban plan of rationalized zoning and public control of urban land as a model modern community for his adopted country. His Toronto Island project, had it been built, would indeed have been Modern architecture of “more than isolated buildings.” But such a thing did not prove possible for Coates in Canada.

32 “Canadian Architecture Praised.”
33 The presence of nature is also emphasized on the plan for Iroquois New Town, where oversized patches of trees are placed apparently at random throughout the community.
34 The other three communities were designed with industrial components: Kitmat was a company town for Alcan; Don Mills, in it initial conception, was to include its own industrial base, although it never materialized; and Iroquois New Town was to include a cross-section of industry as well as a deep harbour.

Elspeth Cowell was employed at the Centre Canadien d’Architecture / Canadian Centre for Architecture in Montréal at the time this paper was written. She is currently based in Verplanck, New York.