approach. This plan should be developed with the full participation of relevant departments of the governments of Canada and Ontario, as well as those of affected regions, area municipalities, conservation authorities, the private sector, non-governmental groups, and the public. It should emphasize:

- protection of remaining natural areas;
- rehabilitation of degraded areas;
- a mechanism for considering cumulative environmental effects; and
- improvement of access and recreational opportunities.

Any shoreline plan should have the benefit of expertise in the affected community; therefore, before a plan proceeds, interested groups and individuals should have the opportunity to comment on and improve the ideas advanced by the Royal Commission and its work groups. Such input would allow the shoreline planning process to proceed with the support of improved community confidence and focus.

RECOMMENDATION

26. The Royal Commission recommends that as early as possible in the process, the Province ensure public consultation, including public hearings, to permit interested parties and the public to respond to recommendations on shoreline regeneration, made in the Commission's *Watershed* and *Shoreline Regeneration* documents, as well as in this final report.

It is important to prevent construction of major new projects without the benefit of the shoreline plan, because these may create unnecessary harm and foreclose options for future benefits.

RECOMMENDATION

27. The Royal Commission recommends that the Province place a moratorium on approval of all major new lakefill and shoreline erosion control projects, pending approval of a Shoreline Regeneration Plan.

Notwithstanding the need for a moratorium, some small projects might have no material influence on the plan, or there might be demonstration projects that could provide valuable insights and other benefits without compromising the integrity of the plan. The criteria for "small" and "demonstration" should be determined very early, to avoid uncertainty.

RECOMMENDATION

28. The Royal Commission recommends that criteria, performance standards, and procedures be established for small or demonstration projects that

The old way of doing things has proven hollow and sometimes quite destructive, though we have not yet learned the rules for the new ways of doing things, so we are in the age of in-between.

Morris, D. 1990. "The ecological city as a self-reliant city." In *Green cities: ecologically-sound approaches to urban space.* Montreal: Black Rose Books.

The social, economic and ecological forces that shape the city are completely interlocked in the world that we experience. Neither our institutions nor the structure of our systems of governance reflect this reality, nor do they respect the logic of the interdependent systems that they represent.

Jacobs, P. 1991. *Sustainable urban development.* Montreal: Third Summit of the World's Cities.

could be undertaken without compromising the integrity of the Shoreline Regeneration Plan.

Before the Shoreline Regeneration Plan is Complete

An effective shoreline plan, efficiently administered, is essential to the long-term health of the waterfront. While development and agreement on the plan may take several years, some matters merit immediate action. It is proposed that the Ministry of the Environment prepare up-to-date sediment standards for open-water disposal and construction standards for lakefilling, to be applied to completing current work as well as any small or demonstration projects. In addition, consideration can proceed on finding alternative means of dealing with materials produced by construction, as well as creation of greenways and the Waterfront Trail.

Lakefilling is discretionary activity. Given the link established between sediment contaminants and uptake by plants and fish in the aquatic food chain, it seems reasonable to avoid knowingly and voluntarily damaging aquatic ecosystems and the quality of our drinking and bathing water.

Recommendation

29. The Royal Commission recommends that the Province adopt new sediment guidelines for open-water disposal; these should reflect the latest scientific studies, and should establish contaminant limits at levels that will protect aquatic ecosystems.

Appropriate sediment standards are one step in protecting the quality of water on the shore; applying such standards effectively, using a quality assurance system, is the important second step. This is essential, particularly in view of the Commission's information that, in the past, 15 to 25 per cent of material deposited at lakefill did not meet existing sediment standards.

Recommendation

30. The Royal Commission recommends that the provincial Ministry of the Environment and the Metropolitan Toronto and Region Conservation Authority review the quality assurance system used to monitor and control the quality of materials accepted for lakefill and that all necessary improvements be made to improve its effectiveness.

There are several codes and standards governing house construction, but none for massive lakefill structures that may contain large quantities of contaminated sediments. Considering that some of Ontario's engineers and engineering firms are known and respected worldwide, it is clear that we have the expertise needed to set appropriate standards and practices that will ensure the safety of the public and the natural environment.

RECOMMENDATION

31. The Royal Commission recommends that the federal and provincial governments consult with marine construction engineers, academics, and experts with relevant information, regarding practical codes and standards applicable to lakefill and erosion control structures. Possible topics include standards related to the range of water levels, intensity of storms, allowable fill loss, turbidity, and any other issues connected to public safety, public property, and aquatic habitat.

As soon as new and tighter MOE draft sediment guidelines are applied, a great deal of slightly contaminated material would be rejected as lakefill. The precise volume is unknown, but is estimated to be at least half of all material currently being accepted. This means that, once construction activity recovers from the recession, as many as 1,000 truckloads per week would require new disposal sites. In the past, this material was accepted at the Leslie Street Spit for less than $100 per load. Even at current rates (more than $1,000 per load), this material would not be welcome at sanitary landfill sites, because capacity is limited. Furthermore, the degree of contamination on most loads is low enough that disposal in licensed sanitary fill sites is not necessary. Obviously, a practical alternative is needed.

RECOMMENDATION

32. The Royal Commission recommends that the Ministry of the Environment create a new "restricted fill" waste classification for excavated soil that is unsuitable for open water disposal, but does not require the degree of control imposed for sanitary landfill. Moreover, the MOE should actively assist in identifying and licensing suitable sites.

The classic "3 Rs" approach to any waste problem — reduce, reuse, recycle — can be applied to construction excavation wastes.

Reducing the amount of excavate produced by deep excavations for parking lots can be achieved by building above-ground parking garages, reducing the number of parking spaces required below buildings, and increasing public transit capacity. This excavate is the material that is most often used in lakefill.

Other considerations such as aesthetics, safety, security, and the very high value of downtown land will dominate decisions about parking. But, because excavation is typically less than five per cent of a building's cost, and the cost of new transit would dwarf even the recently inflated price of landfill disposal, the requirement for underground parking is unlikely to change quickly.

Recycling is a practical approach for some bricks and broken concrete, but these materials represent a small proportion of overall construction waste.

Reuse offers some very interesting options. If the material is regarded as a resource, rather than a problem, there are possibly some positive ways of employing it. For example, small amounts could be utilized to landscape nearby grounds, in order to provide contour and texture. Further away, they could be used in noise berms and toboggan or ski hills. On a still larger scale, millions of cubic metres could

raise the elevation of industrial lands currently under redevelopment in downtown Toronto, such as the Railway Lands, Port Industrial Area, Garrison Common, and Ataratiri.

The Commission has been advised that, assuming that contaminated soils below can be sealed properly, large amounts of material could be utilized in these ways. Benefits would include raising some lands above the floodplain of the Don River, achieving pleasing slopes and contours, "hiding" expressways and rail corridors in newly created ravines, and improving sound buffers and general drainage. It has been estimated that, in downtown Toronto, as much as 12 million cubic metres (15 cubic million yards) could be diverted from waste disposal sites — an amount that would exceed the projected production of excavated soils over the next decade.

Recommendation

33. The Royal Commission recommends that the possibility of using excavated material be evaluated in the preparation of plans and proposals for redeveloping downtown Toronto sites, such as Garrison Common, the Railway Lands, the Port Industrial Area, and Ataratiri.

Waterfront Greenway and Trail

Although a Waterfront Greenway and Trail should be part of the Shoreline Regeneration Plan, there is no need to wait for the plan before encouraging initiatives that will help regenerate the terrestrial edge of the shore and make it more accessible. Parts of the Waterfront Trail exist, and further development is under way. The greenway concept can help create the natural network that will encourage more species at the waterfront. Greenways and shoreline regeneration initiatives are highly complementary. (See next chapter for an extensive examination of the greenway concept.)

Recommendation

34. The Royal Commission recommends that the Waterfront Greenway and Trail be integrated into the proposed Shoreline Regeneration Plan for the Greater Toronto bioregion, and that work should proceed while the plan is being prepared, providing that it does not compromise the plan's integrity.