Marinas on the Great Lakes of Canada

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Abstract

The marinas on the Great Lakes of Canada present a different set of issues for developers and operators compared to those in Britain and Northern Europe. This paper examines the main features and considerations of; planning, development, operation and the different characteristics of Marinas on each of the Lakes within the province of Ontario in Canada. Climatic and government involvement at federal and provincial level are key determinants.

1 Introduction

The Great Lakes complex in North America lying astride the Canadian and United States borders comprises the largest inland water area in the world. The Lakes from west to east - Superior, Michigan, Huron, Erie and Ontario are linked by canal and the St Lawrence Seaway to the Atlantic Ocean. The system is over 2000 km. in length.

These lakes also border the industrial heartlands of both the United States and Canada. The great cities of Chicago, Detroit, Buffalo, Rochester, Hamilton, Toronto and Montreal are to be found on the waterway system. This population base from two of the worlds richest countries has inevitably manifested itself in a demand for boating and boating facilities that in turn has given rise to a plethora of marinas. The concentration at the southern end of Georgian Bay in the province of Ontario is considered to be the highest anywhere in the world.
The province itself has over 370 marinas serving a population of some 8 million people.

The aim of this paper is to explore the particular characteristics of marina development and the operation of marinas on the Great Lakes in Canadian province of Ontario. And to draw some comparisons with marina developments in Europe, particularly Britain.

2 Government Structure

Canada operates on a federal system of government. Under that the Federal or National Government has responsibility for certain areas which are of national concern such as; foreign policy, defence; transport some taxation etc. The provincial governments deal with areas such as; education, housing, roads, planning, some taxation etc. Almost inevitably under such a system there is a degree of competition or conflict between the relatively strong provinces such as Ontario and the relatively weak federal government when it comes to domestic issues.

In the Provinces there is a system of regional and city government, which deal principally with issues such as planning and service provision. The development of marinas on the great Lakes is principally involved with the provincial levels of government.

In Canada the Federal Government is responsible for several areas in connection with recreational boating. Some of this is undertaken through its overall responsibility for Navigation which operates through the Coast Guard service and includes the overall running of the St Lawrence Seaway and the Great Lakes. The Ministry of Fisheries and Oceans is responsible for the development of ports and harbours. This is principally to develop these for commerce, fishing and communications but there are many examples particularly in the Georgian Bay area of Lake Huron where small boat harbours have been developed by this Department. This allows the Federal Government the opportunity to demonstrate that it has a role to play at the local level. It has also proved to be a useful source of finance and provision of facilities in the remoter areas where commercial operations are likely to be less viable.

Canada also has a National Parks Authority that is responsible for the Trent-Severn Canal that links Lake Ontario to Georgian Bay on Lake Huron and the Rideau Canal which links Lake Ontario to Ottawa. Any Marina Development on these systems will need permission from Parks Canada- the National Parks Authority.
3 Planning Considerations

In Canada, planning operates, essentially, on a zoning system. That is to say the within the planning system plans are drawn up that identify areas of land for particular purposes. Beyond that there is relatively little control over the style, layout and form of any development, including marinas - although there are building controls that regulate the actual construction of the buildings etc.. However in some areas local bye -laws can enacted that provide a degree of control over development.

However in Ontario, most Marinas will need to undertake an Environmental Assessment in accordance with the Environmental Impact Assessment Act 1989, and submit it for approval to the Ministry of Environment and Energy. This provincial legislation ensures that a range of consultations are carried out and certain environmental aspects considered.

Provincial Governments can also impose restrictions on the use of craft e.g. in terms of speed, require licensing of and provide legislation, restrictions and guidance on environmental matters such as waste disposal. In Ontario these are set out in the Boating and Marine Regulations which prohibit the discharge of sewage and garbage. his means all boats must have holding tanks that can be pumped out at Marinas. Generally, Canadians have a high environmental awareness when it comes to such issues as waste disposal.

In terms of conservation of historic buildings and sites areas can be declared National or Provincial Parks which offers protection from most forms of commercial development. Within the urban environment there are relatively few locations which could be described as historic conservation areas as one might find in Europe. Where these do exist special controls can be implemented to protect or develop the area, but this does require a degree of co-operation and consensus from all those involved. There is also a strong disposition towards market forces and commercialism. Marinas are seen as being partly recreational and partly commercial.

The effect of this has been that it is often possible to develop marinas where they are commercially viable. This then brings into consideration aspects such as location, access and protection, making some sites more viable than others. It has also meant that in some areas particularly around parts of Georgian Bay there is ribbon development of homes along the shore line. Most of these houses then can construct their own dock or berth- the non- tidal nature of the water combined with sufficient depth of water at the shore line mean that is relatively an inexpensive operation.
650 Coastal Engineering and Marina Developments

While it may be considered that in Canada, archaeological and historic considerations are unlikely to be an issue as they could be in Europe, there are occasions when this is the case. As previously mentioned there are locations of historic importance on the Great Lakes particularly on Lake Ontario in such locations as Kingston, St. Catherines and Niagara on the Lake. In addition, there is the issue of sites important to members of the First Nations- as the native Indians of Canada are referred to. Amongst the consultations that have to take place when considering a development and obtaining planning permission is clearance from the First Nation. There may be evidence of archaeological remains or more likely the site may have been used for ceremonies and Rituals. This was certainly a consideration when building a Marina, in Windsor, on the St. Claire River linking Lake Huron to Lake Erie.

4 Developers

In Canada, the developers of Marinas come from a variety of backgrounds, the federal government, regional and city authorities, commercial operators and yacht clubs are all involved.

As already indicated, the federal government through the Ports and Harbours Department has been involved in the provision of many harbours for recreational use. This may be on their own initiative but it is more likely to be in response to an approach from the public or private sector or a combination of them. The Department will normally be responsible for building the harbour area. They will construct the breakwaters, harbour wall and undertake any dredging that may be necessary. The operator will then be responsible for providing the infrastructure - berthing pontoons, slips, storage areas, parking, clubhouses and chandlery.

A unique instance of a Marina being developed partly by Federal money in co-operation with provincial and city money is the former Olympic Yachting Harbour at Kingston on Lake Ontario. This was built for the 1976 Olympic Games. The host City was Montreal in the province of Quebec. But the aid of Federal money and the excellent location and waters meant that the yachting competition was held in Kingston on a specially developed site next to a Provincial Gaol of the Victorian era. Whether there was an increase in crime amongst the yachting fraternity at that time, to gain a ringside seat, has not been reported. The marina is now operated by the Kingston City Council.

Local government is often actively involved in both the provision and operation of Marinas. In many instances such marinas will be developed and compete with marinas run and operated by the private sector. For example; marinas at
Port Colborne, St Catherines, Toronto, Kingston. have all been developed by the local authorities.

There is a positive attitude towards the use of public money for the development of marinas as happens in some European countries, notably France. Marinas are seen as providing an important boost to the local economy through employment and income. In part they are seen as prestige or flagship leisure development that can be used to attract other developments to the location, but it is also recognised that boat owners spend money in the locality on ancillary items such as; clothes, food and meals, as well as expenditure in the Marina itself.

One of the problems of local government running marinas is that labour can be highly unionised and regulated and a that lack of flexibility that is often essential in running marinas is missing. This has meant that in some locations activities such as refuelling and boat repairs are left to the private sector where a more flexible attitude may prevail.

In the Port Dalhousie area of St Catherines at the entrance to the old Welland Canal, the local authority was instrumental in setting up an action group to co-ordinate the activities of the public and private sector in the development and conservation of the waterside area that contain buildings, wharves and locks of architectural, engineering and historic importance. This action group had to work largely through persuasion and consensus, rather than statutory planning restrictions to redevelop this historic area and ensure the preservation of buildings and artefacts. The result has been that many of the buildings have been preserved, the area comprises a lively and popular waterside development of shops, bars, restaurants, beach facilities and two marinas one privately and one publicly operated.

The private sector has also been instrumental in developing marinas. Most of the Marinas on Toronto islands have been privately developed, sometimes by Yacht Clubs for their members. Here the islands themselves have provided protection from the open waters of Lake Ontario and consist of many inlets that are easy to develop with berthing pontoons. The area has the advantage of being a traditional recreational area for the citizens of Toronto, the lagoon itself offers an area of protected sailing and there is easy access to the wider area of Lake Ontario.

Elsewhere, the private sector have developed marinas in what might be considered all the traditional ways. At Port Dover on Lake Erie, boat yards have expanded into the creek to provide berths, near Hamilton, on Lake Ontario, at Fifty point Marina the development has been funded by the provision of residential and leisure facilities and at Port Jordan it is based on a Hotel and Leisure development.
As indicated Yacht Clubs have developed Marinas for their members on the Toronto Islands. Another example of a private Yacht Club developing a Marina is at the historic and well preserved town of Niagara on the Lake where the Niagara River flows into Lake Ontario. Here the Yacht Club has taken over an old railway dock and wharf and preserved some of the historic buildings on the site. This is a relatively wealthy and exclusive club in a similar such area.

5 Operational Considerations

While the Great Lakes are non-tidal and consist of fresh water this does not mean that operations are necessarily easier than northern European Marinas nor that they can be compared to Mediterranean Marinas. within Ontario each of the Lakes has its own characteristics which provides a set of problems.

Inland Canada has a continental climate of extremes that increase towards the centre. This means that winter temperatures can fall to -40 C and the in the summer they can exceed +40C. All the lakes are liable to freeze in winter especially Superior, Michigan and Huron. It has been known in mild winters for there to be relatively little ice on Lake Ontario, but the problem of ice flows brought down by the rivers particularly in the spring remains a problem. This means that the boating season is from April to October and that all the boats and often the infrastructure as well has to be hauled out and floated every year.

At the Port Colborne Marina attempts were made to design the floats for the pontoons so that they would ride up when compressed by the ice. Unfortunately, Lakes Ontario and Erie have been effected by a small mussel called the Zebra Mussel that is not a native species and is believed to have been brought in by a freighter illegally cleaning its tanks. This has attached itself to the floats giving them a rough surface which the ice can grip, thus invalidating the design.

The effect of this seasonal nature of boating means that marinas are involved in additional expense. But they can only levy berthing charges for half the year. With such extremes of temperature it is not always advisable to keep boat in the open over the winter months. This in turn means that the opportunity for on land storage is lost as boat owners winter in particular the smaller motor boats and yachts in barns etc. In addition some of the marinas are in relatively exposed locations where winter snow storms and gales mean that on land storage is not always possible. Where dry land storage is possible large areas are required to store both the boats and pontoons. One of the advantages of Canada being multi car orientated society is that marinas have to provide extensive car parking areas for the summer.
While tides are not a problem Lake Erie is relatively shallow with a saucer shaped underwater profile of about 250 km in length. Here climatic pressure can cause a rise and fall in water height at the ends of the lake of up to almost 2 Mts. this means that marinas have to use pile systems to allow the access and berthing pontoons to cater for this rise and fall. The rise in water level is often associated with bad weather conditions so the breakwater also has to be built to accommodate the rise in water level from its normal one together with any associated wave height. This is particularly the case at the eastern end of the lake as the weather system moves from west to east.

6 Location & Usage

The utilisation of boats on the Great Lakes appears to be no different from those kept in Marinas elsewhere in the world. The number that are actually out of their berths even on a perfect day is rarely above 10% and many are visited and used without actually leaving their moorings.

In Ontario, the most popular location for Marinas is the southern end of Georgian Bay on Lake Huron around the towns of Midland and Victoria Harbour. This area claims to have the highest concentration of Marinas in the world. Its popularity is the result of several factors.

Firstly, The water area is relatively protected from the expanse of Lake Huron by the Bruce Peninsular, part of which is a National Park. This is the northern extension of Niagara Escarpment which gives rise to the Niagara Falls and results in Lake Ontario being at a substantially lower level than the other Great Lakes. Georgian Bay itself has a Water Area of 70 Km (E-W) and 300 km. (N-S). the water itself is clean and unpolluted and suitable for swimming and fishing.

Secondly, the area itself presents an attractive sailing and cruising area with many inlets and in the northern and eastern shores section many islands. The Eastern shore is comprises the Thirty Thousand Island area which has several provincial parks.

Thirdly, an good sailing system has development with marinas, anchorages and sailing clubs to cater for a wide range of users- cruising, racing, fishing, motorboats and yachts. Variety is also created by the Severn Trent Canal which links Georgian Bay to Lake Ontario by an inland Waterway network.

Finally, the area is within 2 hours drive by motorway to the metropolitan area of Toronto which is the population and economic centre of Ontario.
Coastal Engineering and Marina Developments

By contrast the concentration of marinas and utilisation of boats on Lake Erie is lower. It is used far more by motor boats for fishing and day trips. In fact only about 30% of boats kept in Marinas are sailing boats. There is even an element of commercial fishing on the Lake.

Lake Ontario is more polluted than the other lakes by virtue of it being downstream of some of the main industrial centres on the St Claire river, Lake Erie, the Niagara river and having several major industrial complexes on both its Canadian and American shores.

There is probably more racing on Lake Ontario by comparison with the other lakes, with mid-week evening series being popular. The ease of access of Marinas to the centres of population and work mean that it is relatively easy for people to get down to their yachts have a picnic supper and start racing. Some marinas even provide tables, benches and barbecues to facilitate this. Smaller yachts and dinghies can also race in the sheltered waters at Hamilton, Toronto and in the Kingston area. The Olympic Yachting Marina facilities at the later help ensure that racing is an important activity in this area.

Surprisingly, by European standards and expectations there is relatively little cross border activity. That is to say there is a low amount of traffic between the United States and Canada on the system. The distance in many instances being less than cross channel trip. Part of the reason for this may be the cultural and cost similarities between the two countries mean that there is relatively little attraction or benefit in such trips. Also the land connections are relatively easy with plenty of bridges across the rivers separating the two countries. Such voyages as there are tend to be from the United States to Canada. The latter generally having the more interesting and varied cruising areas and being a lower cost area with relative values of the American and Canadian Dollar.

Boat Charter on the Lakes is largely restricted to day/fishing boat hire—although many of these will be kept in Marinas. Cruising motor boats are available for charter on the Canal systems and in the Thousand Islands area at the Eastern end of Lake Ontario.

Within the Province of Ontario there is a trade organisation for Marina operators called Ontario Marina Operators Association which acts as publicity and pressure group for the industry.

7 Conclusion

The main features of marinas on the Great Lakes can be summed up as being:
Firstly, Boating and Marina activity on the Lakes is extremely seasonal being limited by ice and the very cold winters.

Secondly, that Marinas are often developed as the result of collaboration and co-operation between the public and private sectors with all levels of government - federal, provincial, regional and local being involved.

Thirdly, regional and local government take a very positive attitude towards the development of marinas and can see the economic and social benefits of them.

Fourthly, outside the National and Provincial Parks there are relatively few controls and restrictions on the development of marinas in terms of their location, layout and design.

Fifthly, Marinas have rarely been used as a catalyst for urban redevelopment schemes, as happens in much of Europe, largely because the opportunities in terms of redundant docks or waterside areas suffering from degeneration and industrial and social decay do not readily exist.

Sixthly, while the Lakes themselves have different characteristics and the nature of boating and yachting associated with them differs the marinas themselves are similar.

Finally, the utilisation or lack of it of boats by their owners is similar to other parts of the world.

Marinas on the Great Lakes of Canada provide an interesting comparison in terms of their development and operation to those in Britain and northern Europe in particular.

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