ISSN: 1231-4005
e-ISSN: 2354-0133
DOI: 10.5604/12314005.1161598

THE ROLE OF TRANSPORT IN SELECTED EUROPEAN MARINAS PART ONE

Maciej Bilski

Politechnika Poznańska, Wydział Architektury i Urbanistyki
Nieszawska Street 13C, 61-021 Poznan
tel.: +48 61-665-3255, fax: +48 61-665-3300
e-mail: maciejbilski@gmail.com

Abstract

Marinas are extremely complex urban solutions that incorporate all the necessary communication routes in its structure. The role of transport in selected European marinas can vary depending on location and conditions of an area. The study covered the role of transport in combination with air, sea, rail transport and shared zones for pedestrians and vehicles in Royan Marina (France) and Brighton Marina Village (Great Britain). The summary highlights and identifies the key features, pointed out by users, considered as advantageous or disadvantageous for selected European marinas from the point of view of transport and architectural and urban design solutions.

Transport connections including car traffic, sea-lanes, rail traffic, pedestrian communication are presented in the paper. Network of communication connection in Royan Marin and Brighton Marina Village is subject of the paper. The paper covered the role of road transport in combination with air, sea, rail transport and shared zones for pedestrians and vehicles.

Keywords: transport, marina, sea-lanes, rail traffic, car communication

1. Introduction

From the point of view of transport, the summary highlights the most important solutions considered advantageous or disadvantageous for selected European marinas from the point of view of transport and architectural and urban design solutions. [1]. When analysing the solutions for selected European projects, particular focus was on the specifics of communication links, which depend on the characteristics of the scheme data. The study covered the role of road transport in combination with air, sea, rail transport and shared zones for pedestrians and vehicles.

2. Royan Marina, France

It is a tourist harbour capable of handling smaller industrial ships. It is located in the middle of a coastal town and serves as an important tourism and entertainment centre. The turbulent history of development of the town and the port caused that it has a very specific structure. The layout plan shows various stages of implementing the scheme, which was a fishing port at the beginning, afterwards a war port, and finally it has become mainly a tourist destination. The old fishing port is the oldest part of the port, visible from the north-western part of the town; later the port was extended with two breakwaters, which formed an additional tourist part and a place to handle transport ships. The last stage involved extension of the wharf from the south-western side to handle ferries (Fig. 1).

Car traffic

Access road from the nearest A10 motorway is a section of over 30 km through the N150 national road and further through quite narrow streets of the town, and in consequence, it is

a significant obstacle for the transport of larger ships. The entrance to the marina is provided from two access roads, which slightly facilitate operations around the port, nonetheless the specifics of the location unfortunately cause many difficulties (Fig. 2). The nearest airport, Rochefort-Saint-Agnant, is situated ca. 30 km away from the marina; more destinations are available from the La Rochelle airport, which is 70 km away. Owners of light aircraft can use the aero club airport, which is 10 minutes' drive from the marina.

Fig. 1. Satellite photo of Royan Marina [6]

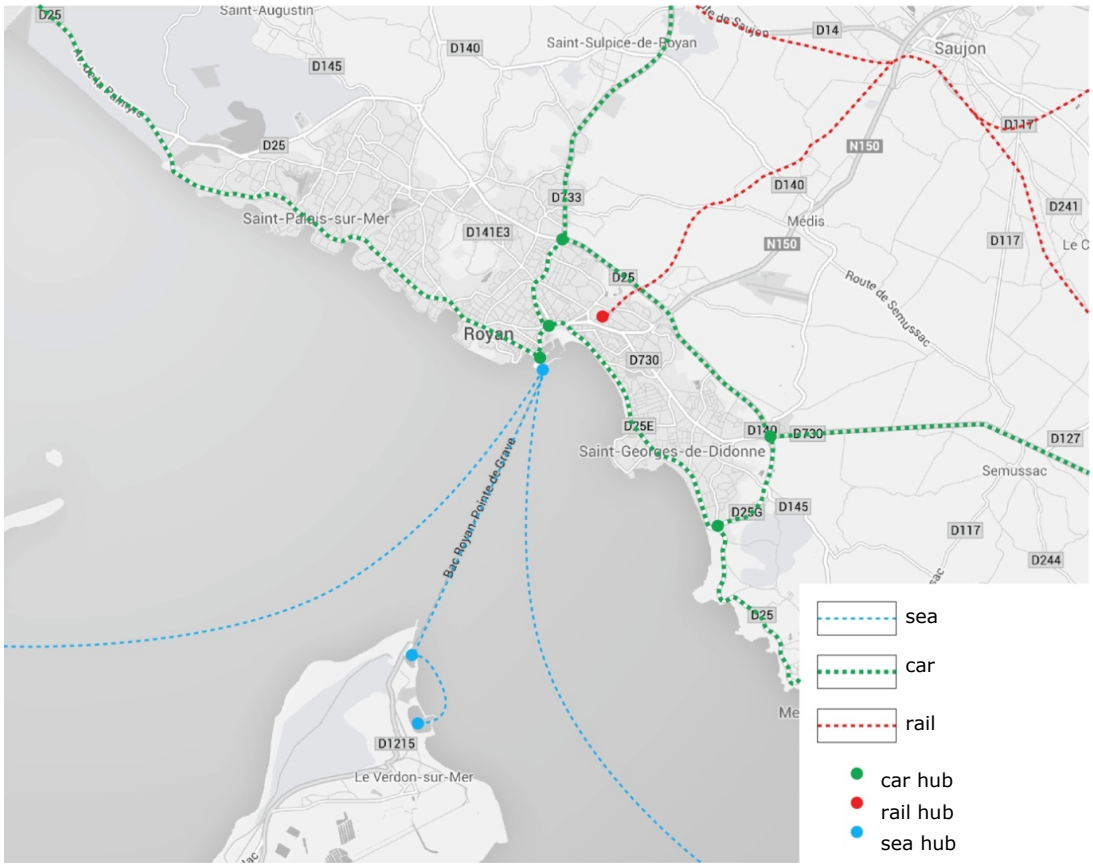

Fig. 2. Network of communication connections

Sea-lanes

The port is located on the west coast of France, thanks to which there are no restrictions in reaching any destination along the European waterways. The Gironde estuary at the confluence of the rivers of Dordogne and Garonne makes it possible to handle river transport and forward freight. The port has a small infrastructure to handle cargo ships, thanks to which the port serves as a logistics centre of regional importance. The port has a special pier to handle ferry traffic, which enables efficient connection with the other bank of the estuary.

Rail traffic

The nearest railway station serving passenger connections is located in the centre of Royan ca. 1 km away from the port; there is no direct railway connection to the port. There is also no cargo transportation link, which reduces the value of the port as a logistics centre.

Pedestrian and car communication

The communications network available owing to the existence of numerous quarters enables many access ways for pedestrians and access roads in the vicinity of the port. In the marina itself, there are no restrictions for both pedestrian and car traffic, with the exception of piers. The ferry wharf has become the most important communication point as it makes it possible to get from one shore of the estuary to the other. The closest connection alternative is located over 70 km away from it.

Transport connections to the port

Most of the port area is earmarked for handling of tourist ships; in addition, a part of the quay is adapted to handle smaller transport ships (Fig. 3). The marina has quite large unloading infrastructure, which increases the rank of facility for handling the tourist and transport part; besides, in the eastern part, beyond the breakwater, there is an additional slipway for handling small pleasure craft [5].

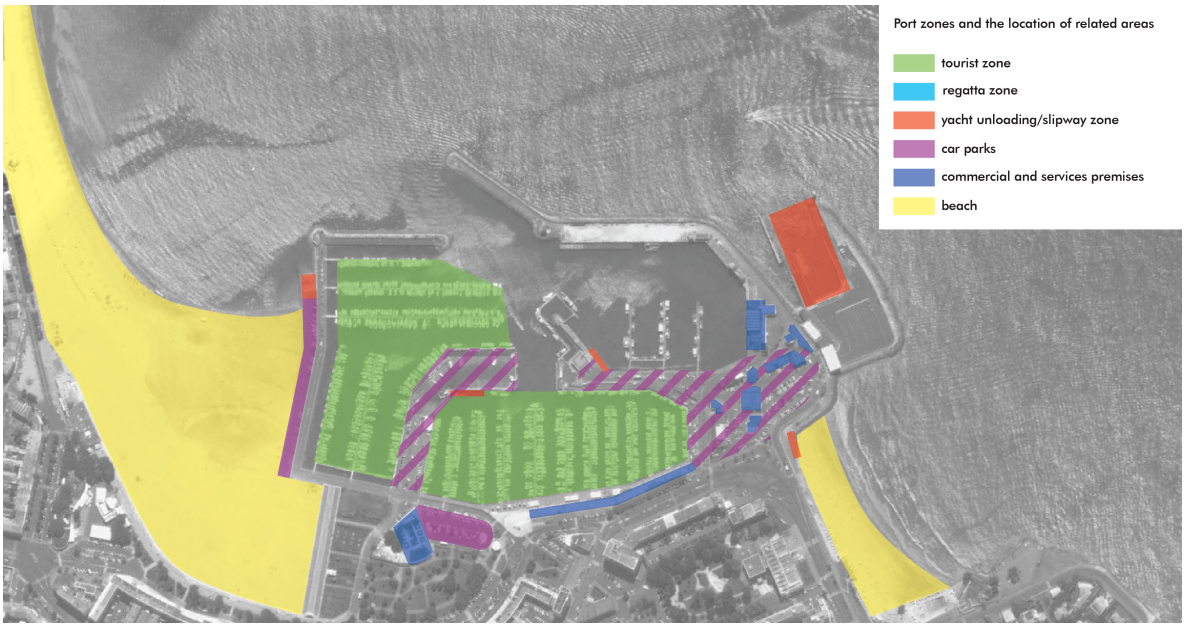

Fig. 3. Port layout in relation to transport

Because there are no restrictions in the pedestrian and car traffic of the port, the access to car parks within the marina has become trouble-free. On the other hand, there are no major car parks in the closest quarters, which make it difficult to organise major events within the port [4].

3. Brighton Marina Village, Great Britain

It is a large port located in close proximity to the city centre, designed as part of a larger transport scheme with full commercial, service and residential infrastructure.

The marina in Brighton distinguishes itself from many other marinas not only in the UK, but also in Europe (Fig. 4). As one of few schemes, it provides such comprehensive, and yet complex and functional solutions for its users [2].

Fig. 4. Satellite photo of the Brighton Marina [6]

Car traffic

There are access roads to the port from the A27 Brighton bypass through the A23 motorway, then through the A259 main road along the coast (Fig. 5). There is an unobstructed high-capacity access available even for oversized vehicles. It can be reached from the city centre by bus or taxi in less than fifteen minutes. You can get to the marina from London airports in an efficient way – the trip will take ca. 1 hour; for people with their own aircraft, there is space at the Shoreham airport, which is just 30 minutes' drive from it [5].

Sea-lanes

United Kingdom, an island country, is open to all maritime routes in northern Europe. When sailing through the English Channel, also referred to as the Channel, to the east you pass by Dover and enter the North Sea; to the west, by crossing a number of sea-lanes connecting UK to continental Europe, you pass by a large transhipment port in Portsmouth and further you enter the Atlantic Ocean.

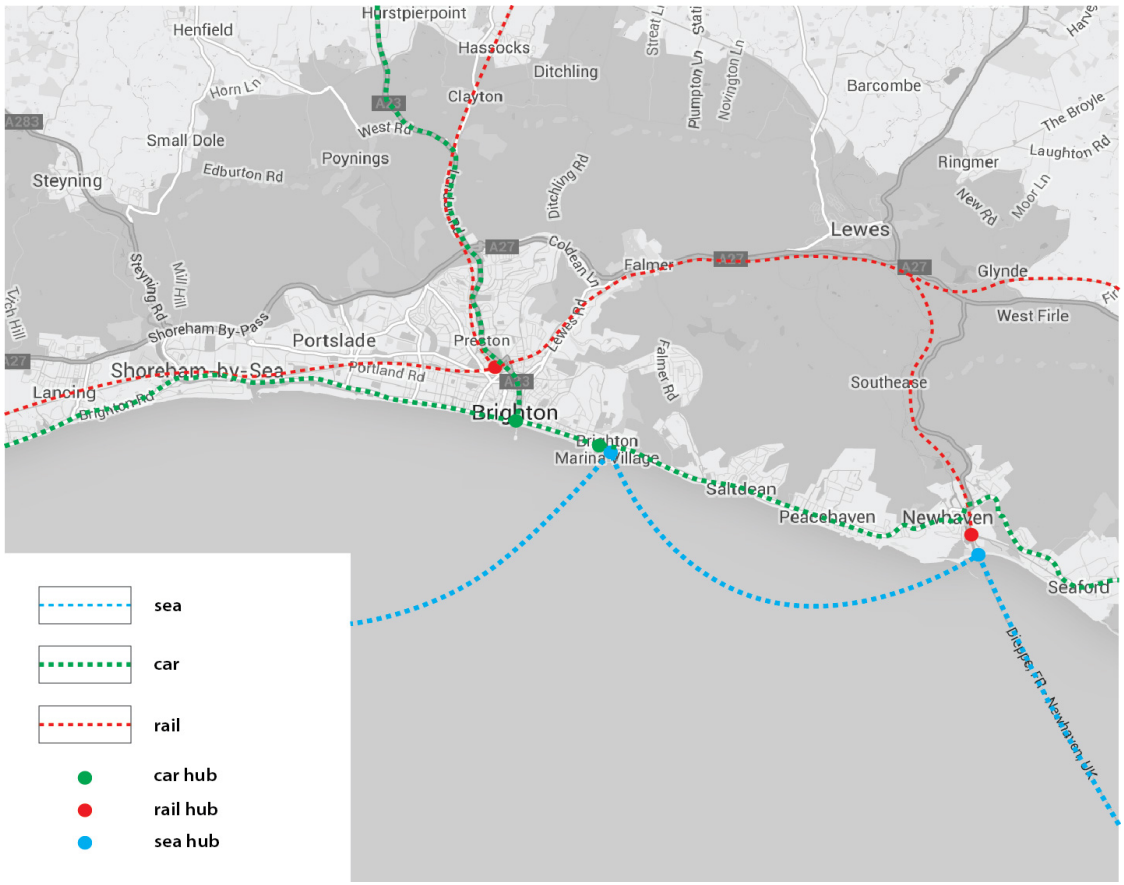

Fig. 5. Network of communication connections

Rail traffic

Rail traffic is provided by the railway station in Brighton, which supports the most of the passenger flow. Unfortunately, there is no direct rail connection to the marina. An additional attraction for tourists is the world's oldest operating electric railway, which has been serving passengers since 1883 and connects the pier in Brighton with the location of the new marina; however, its nature remains symbolic and it is not used for mass transportation of passengers.

Pedestrian and car communication

The harbour is accessible by only one route, the Marina Way, which results in traffic jams during heavy traffic, whereas within the marina itself, there are roundabouts at the all junctions. You can access the marina's area without any limitations to the first quarter, where there are commercial and services premises. The residential area requires special passes to enter, but it does not limit the pedestrian traffic.

Transport connections to the port

Due to its specifics, the port has prepared only two small unloading zones, which are used only in case of ship breakdowns or for periodic technical inspections.

A high number of inhabitants and the number of commercial and services premises have translated into a need for a huge amount of parking spaces. The entire restricted zone assures space for its inhabitants besides at the entrance to the marina there is a large car park for buses and a free multi-level car park for 1,500 cars (Fig. 6).

Fig. 6. Port zones and location of related areas on the basis of satellite photos

4. Summary

The summary highlights the most important solutions considered advantageous or disadvantageous for selected European marinas from the point of view of transport and architectural and urban design solutions. It identifies the key features pointed out by users:

a) advantages:
   - direct connection of the port and sea lanes with car and rail traffic,
   - no restrictions for bulky transport ships to be launched,

b) disadvantages:
   - the main unloading zones located outside the breakwaters, an impediment in difficult weather conditions,
   - insufficient number of parking spaces,
   - no efficient port connection to a railway hub [3].

References

[1] Liskiewicz, W., *Sieć marin jako element rozwoju turystyki żeglarskiej na polskim wybrzeżu Morza Bałtyckiego*, Akademia Wychowania Fizycznego w Gdańsku, Gdansk 1998.
[2] Quinn, A. D., *Design and Construction of Ports and Marine Structures*, McGraw-Hill Inc., New York 1972.
[3] Tobiasson, B. O., Kolmeyer, R. C., *Marinas and small craft harbors*, Van Nostrand Reinhold, New York 1991.
[4] Tsinker, G. P., *Marine Structures Engineering*, Chapman & Hall, New York 1994.
[5] Tsinker, G. P., *Port Engineering: Planning, Construction, Maintenance and Security*, John Wiley & Sons, New Jersey 2004.
[6] Google Earth, www.googleearth.com, 15.04.2015.