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# THE ROLE OF TRANSPORT IN SELECTED EUROPEAN MARINAS. PART TWO

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***Abstract***

*Once again, the study covered the role of road transport in combination with air, sea and rail transport and shared zones for pedestrians and vehicles. Two diverse ports located in Portugal have been chosen, first Marina de Albufeira and second Cascais Marina. Due to their specifics, the ports address the issues concerning traffic connections in a completely different way. 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 Marina de Albufeira and Cascais Marina 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

The second article in the series under the title “The role of transport in selected European marinas” presents further transport solutions. Two diverse ports located in Portugal have been chosen. Once again, the study covered the role of road transport in combination with air, sea and rail transport and shared zones for pedestrians and vehicles. Due to their specifics, the ports address the issues concerning traffic connections in a completely different way.

## 2. Marina de Albufeira, Portugal

It is a typical port for a location exposed to ocean waves. There is a water region and a part responsible for inland transport solutions with an appropriate bay to protect ships from damage during severe weather conditions. The port is practically invisible from the water line, and it is away from the city centre and main routes (Fig. 1).

### Car traffic

Access to the marina is available from the A22 motorway, the nearest junction of which is located ca. 7 km away from the port, later through the N125, N395 and M526 national roads, the exit from which leads directly to the port. The scheme has an alternative access road leading from the M526 road through the city centre, but the topography is not conducive to fast transit. The nearest airports are located in Faro and Portimao; the former, which is ca. 40 km away, supports a full range international flights, the latter one, ca. 35 km away, is an airport for private aircraft (Fig. 2).

*Fig. 1. View of the entrance to the port and water region from the East [7]*

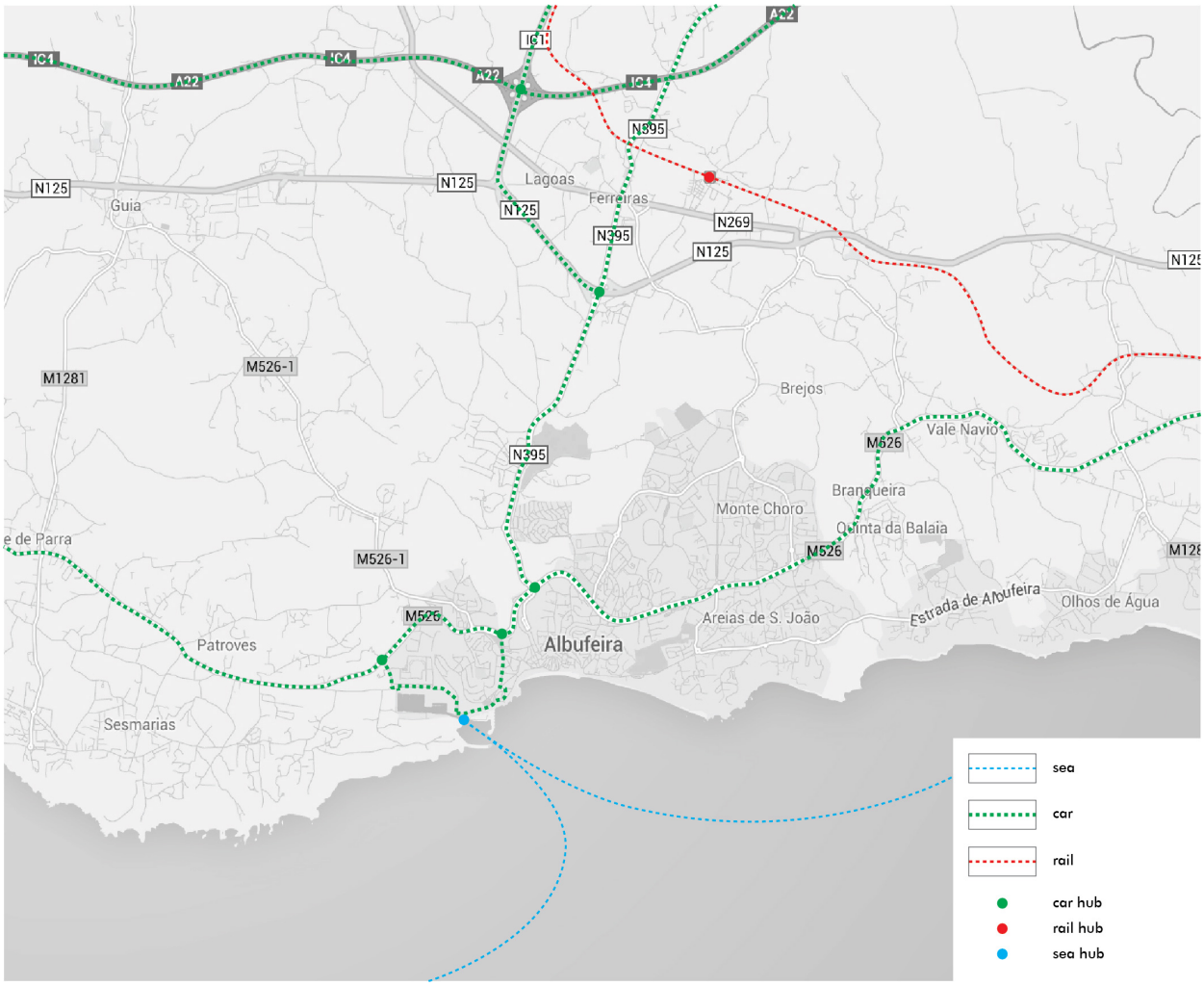


*Fig. 2. Network of communication connections*

**Pedestrian and car communication**

Two main roads and several secondary roads provide the communication in the port; the entrance to the area is not restricted because access to the regatta part and the recreation beach area is provided through the marina's area. The entire scheme is open, without the possibility of separating any part thereof, even the piers with access to the yachts. The proximity of shopping and services areas in the northern part of the scheme increases the intensity of pedestrian communication, whereas the residential area to the south causes additional car traffic [5].

**Transport connections to the port**

The internal water region is completely earmarked for tourist ships, whereas the regatta zone is designated within the port bay. The part for sports boats has a slipway to handle the loading and unloading of yachts, and the berth also performs the function of a car park. The main unloading zone is located in the southern part of the port (Fig. 3).

*Fig. 3. Travelift*

The scheme offers a high number of parking spaces; the main place is located in a composition node in the marina's centre, the additional ones are located at the entrances to the facility and at the beach with regatta zone (Fig. 4).

## 3. Cascais Marina, Portugal

It is one of the major ports in the vicinity of Lisbon, and thanks to that it also has a high accessibility to the complex transport structure. It is primarily oriented towards tourism, with an opportunity the support regatta on the national scale [2]. The port was built as a uniform scheme, and thanks to that it is characterised by high functionality of each element (Fig. 5).

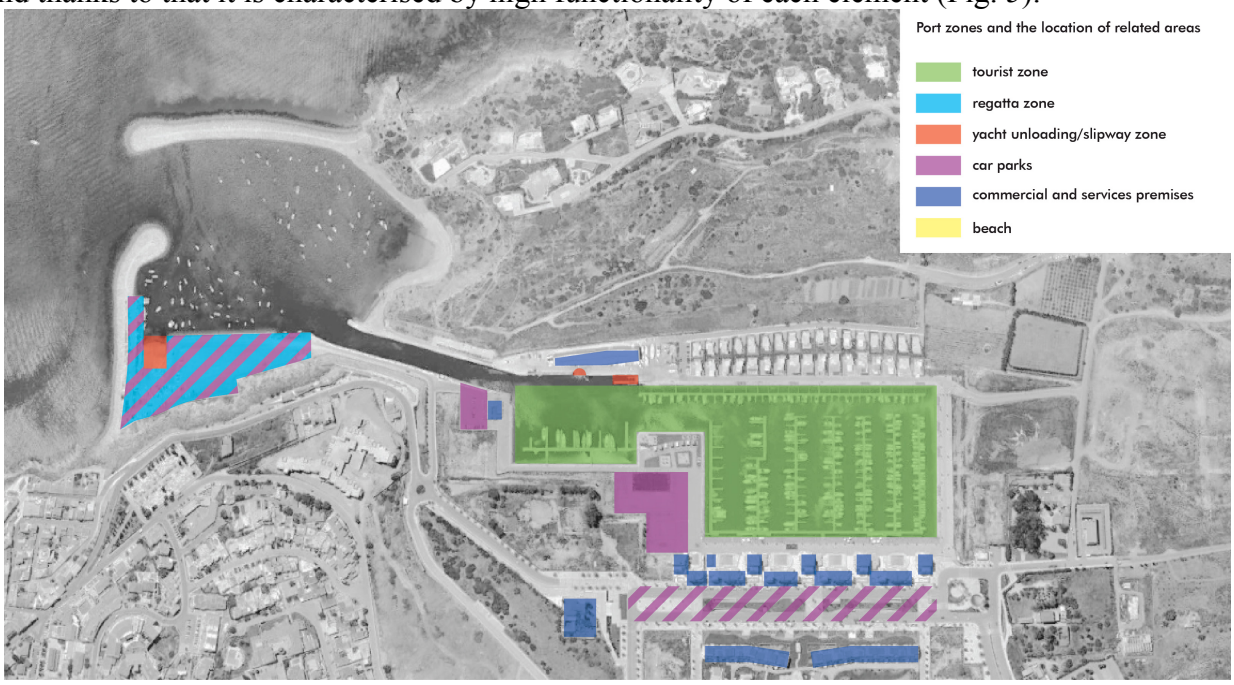


*Fig. 4. Port zones and location of related areas on the basis of satellite photos*

*Fig. 5. Satellite photo of Cascais Marina [6]*

## Car traffic

The nearest A5 motorway junction is located less than 4 km away from the port, further the route runs in the southern direction through the N9 national road and urban roads. High-capacity access has been provided to the port, which allows the transport of oversized ships; in combination with port infrastructure, the solution is an interesting alternative to Lisbon marinas. The Lisbon Airport, located at a distance of ca. 35 km, provides additional transportation options to the destination (Fig. 6). The marina has its own helipad, which significantly increases its attractiveness in terms of transport opportunities [1].

## Sea lanes

The marina is located in the Cascais bay ca. 20 km away from entrances to the Lisbon ports; because of such proximity, the traffic of ships is very high. After leaving the port, bypassing the local traffic, you can head for each of the Western European routes. By sailing eastwards to the estuary of the Tagus River, you can gain access to the entire coast of Lisbon.

## Rail traffic

The port is located at a distance of ca. 800 metres away from a railway station, which makes it possible to travel without additional means of transport; such a combination greatly increases the rank of the facility [4]. There are no cargo connections for handling the port.

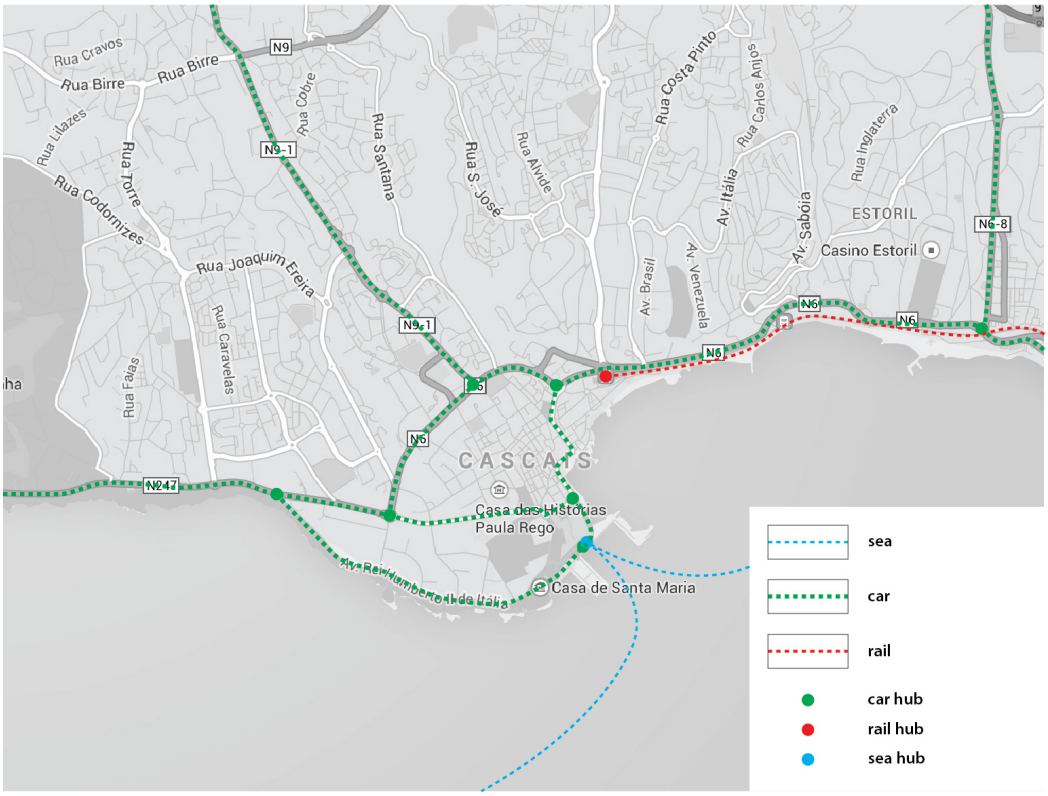


*Fig. 6. Network of communication connections*

## Pedestrian and car communication

Direct access to the port is available through one avenue, Rei Humberto II, whereas the traffic within the scheme itself is organised by means of roundabouts, which significantly improves the ease of movement. The port area is accessible not only for users, with the exception of areas

designated for service of boats and sports clubs with regatta yachts. The opportunity to enter the far-reaching breakwater from the south significantly increases the attractiveness of the place, but periodically it is not accessible [3]. It is possible for the port to completely restrict the access for the public for the duration of major sailing events.

### Transport connections to the port

The port has been constructed as a homogeneous scheme and features a full utilisation of land, and a simple urban layout does not reflect the complexity of overlapping zones and functions of individual parts (Fig. 7). Each port zone has its own space used for unloading of ships; in addition the central part of the port makes it possible to support ships requiring service and a self-propelled gantry crane. Two slipways for regatta boats are placed beyond the main part of the port. The marina itself offers few parking places, but the shortage of space is complemented by the spaces in the regatta zones and car parks to the north of the scheme.

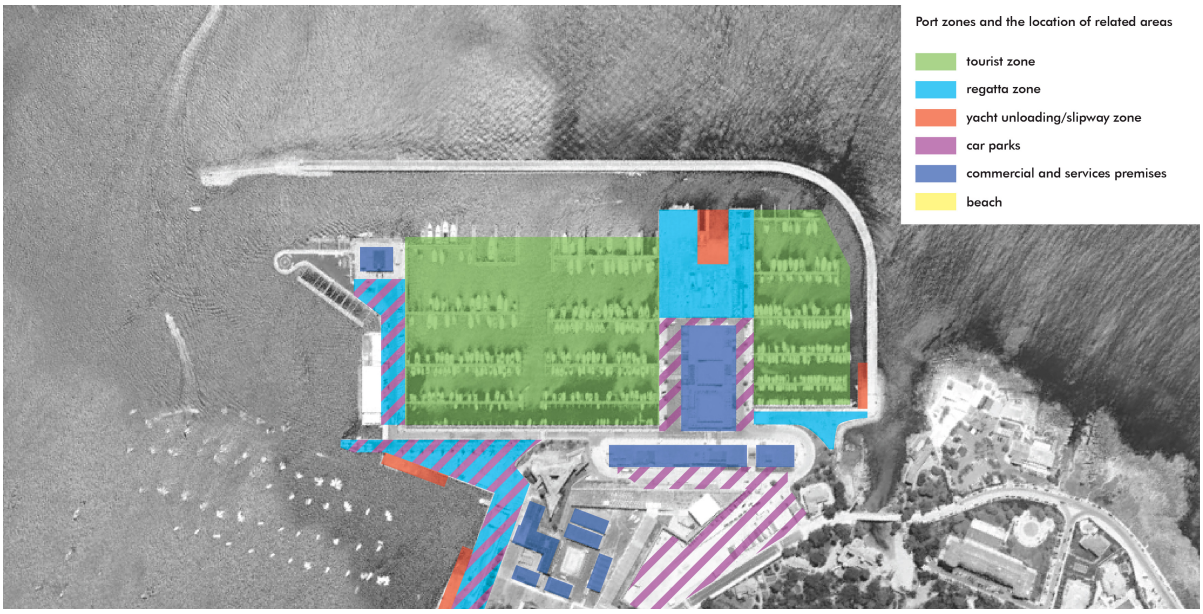


*Fig. 7. Port zones and location of related areas on the basis of satellite photos*

## 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:
   - a helipad within the marina's scheme,
   - the port and the communication system adapted to receive ships of various sizes, up to several dozen metres,
   - well-organised unloading zone – slipway, Travelift (self-propelled gantry crane), crane,

b) disadvantages:
   - location of the marina too far away from the city centre and communication hubs

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