

## The Urbieta Wreck (Gernika) Basque Country

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The Gernika estuary (ria) represents one of the oldest and most important fluvial waterways penetrating the Basque coast.

Its mouth was historically barred by moving sandbanks, its estuary, protected from the dominant northwest winds by the Matxixaco cape and the island of Izaro. However, the waterway has always been an attractive ship route towards the interior of the region, in particular as its depth makes it navigable up to the city of Gernika, over six km inland from the sea.

The most important records confirming that this estuary has been in use since antiquity are to be found in the Roman settlements of Portuondo o Forua. After that we have to refer to the documentary evidence describing the commercial route of ore carriers and barges with varying cargo up to Gernika and the ports of other municipalities on the estuary. The presence of foundries and the activity of the inhabitants of this mining basin dedicated to the transformation of iron are fundamental when evaluating the importance of the navigation and the port activity in this estuary.

### Legislation

The Statute of Autonomy of the Basque Country agreed between the Spanish and Basque governments recognizes, among other values, culture and the historic, artistic, ethnographic and archaeological heritage as being under the exclusive authority of the Autonomous Basque Community.

In exercising this responsibility, the Basque government voted the Basque Cultural Heritage Law n° 7/1990, of 3 July, to regulate activities concerning cultural heritage. According to the Basque Cultural Heritage Law, archaeological remains can be protected under three separate legal regimes:

- Declared Archaeological Properties (Bienes Arqueológicos Declarados)
- Archaeological Properties on the Listed Inventory (Bienes Arqueológicos Inventariados)
- Areas of Potential Archaeological Interest (Zonas de Presunto Interés Arqueológico.)

To carry out any intervention on these properties or areas, permission must be sought from the Department of Culture of the Regional Council of the concerned historic area including the presentation of preliminary plans for the archaeological project.

Equally, considering the natural values of the Gernika estuary and the whole Urdaibai basin, in 1984 UNESCO declared this area a Biosphere Reserve. The protection of the Biosphere Reserve is regulated by the *Law for the Protection and Regulation of the Biosphere Reserve of Urdaibai* passed by the Basque government on 6 July 1989. Nevertheless, no specific archaeological plan exists for this Park which gives priority to the protection of any possible discoveries related to the fluvial navigation, taking into account the finds that have already appeared and the historical tradition in this regard.

### Impact and Archaeology

In 1998, works to channel the river Oka started in the vicinity of the town of Gernika, in two areas called “Urbieta” and “Portuzarra” (Basque words meaning “between two waters”



**Figure 1: Aerial view of the dig; at the extreme right of the wreck is the stern and at the left is seen the transverse gap caused by the excavation equipment during the dredging of the Oka river**

and “old port” respectively). As the area does not benefit from any preventive archaeological protection, no provision was made for archaeological investigation in the project for the works.

Faced with this situation, an archaeologist regularly working in the region alerted the Town Council to the dangers with regards to the defenceless situation of the municipal archaeological heritage in the area where the public works were about to start. Following this denunciation, the Town Council fortunately decided, although it was under no legal obligation, to approve a special budget for archaeological monitoring of the works that had started.

## Description of the Finds

In July 1998, under four meters of earth and mud at the confluence of the Golako, a left bank tributary to the Gernika estuary, a backhoe excavator used to build a breakwater to channel the river, partially destroyed, but at the same time discovered, a wreck dating from the second half of the 15th century. It proved to be the only medieval ship encountered until now in the Basque Country and was named after the location of its finding, the *Urbieta*.

The archaeological impact of the works threatened to totally destroy the recently discovered wreck *Urbieta*, since the channelling wall would have been built exactly where it lay. Therefore, once the municipal and provincial institutions had been alerted, the Council of Bizkaia agreed upon the necessity to excavate and salvage the wreck, for which Manu Izaguirre, author of this text, and Luis Valdés, archaeologist for the region, drew up the corresponding archaeological intervention plan. This plan proposed the excavation, investigation and complete salvage of the wreck in view of its subsequent conservation.

The vessel was resting on a river bank gently sloping downwards towards the present water level, on top of a series of layers of eroded iron ore gravel. Over this layer of iron ore gravel, alternating layers of mud or sand covered the wreck and bore witness to an important transport activity of this mineral in this area.

All the above leads us to believe that the mineral remains found around the vessel could correspond to the period from when the hull was abandoned until it was discovered in its present situation. Nevertheless, we cannot eliminate the hypothesis that the vessel was also used, at an undetermined frequency, to transport the mineral.

Through the excavations it was possible to observe that the vessel had run aground on its port side which, despite its destruction, had kept all its strakes from its keel to its gunnel. On the starboard side only remains of the garboard strake and of some other strakes were found pushed inwards towards the port side.

The central part of the vessel, along about one-third of its length had been destroyed by the backhoe excavator. While most of the solid pieces could be salvaged, many of the construction details of this part were lost such as the keelson and the



**Figure 2:** In order to extract the wreck from the silt of the river, it was required to detach it from the ground by creating a platform of horizontal tubes



**Figure 3:** Once detached from the silt, it required a large crane to lift the block of the wreck onto the bed of a special truck of adjustable height

**Figure 4:** After a careful cleaning of the wreck, the details and design of the archaeological remains were recorded, indispensable for the recreation and elaboration of the real and hypothetical forms of the architecture of the boat



most step. The general morphology of the vessel consists of a “clinker-built” hull, a construction form used on our coast until the middle of the 16th-century and which implies a “hull first” construction system where the hull is built before the rib structure which sustains it once completed. In contrast, since the beginning of the 16th-century until today, the carvel system, or edge-to-edge planking, became dominant.

## Extraction

During the excavation process, great difficulties were met in dismantling the vessel to extract it from its site due to the large quantity and excellent condition of the treenails fastening together the strakes of the clinker-built hull. The option of cutting all the treenails implied an excessive archaeological invasion, which is why it was decided to extract the wreck in one piece. This approach presented significant challenges, including the cost of the operation, the subsequent consolidation and final restitution of the original shape of the hull.

To raise the vessel, the surroundings of the vessel were excavated up to a depth of 1.6m over a sufficiently wide area to obtain a horizontal plane that allowed the boring of transversal tunnelling holes and placement of a series of parallel horizontal tubes under the vessel. Taking into account the irregularity of the mud and sand under the boat, a blocking fence was built around the structure using wooden boards and a metal structure to a height of 60 cm.

The horizontal layer of tubes thus created also served as a base for the earthen block on which the vessel was resting. Once this was reinforced by the metal structure, it was extracted using a heavy-duty crane and placed onto a truck/lorry of adjustable height, which transported the whole block to a temporary storehouse near the location of the find.

## Treatment and Restitution of Shape

After all material not part of the vessel (such as mud, sand and consolidation structures) had been removed, the vessel was placed in a metal crate/cage, which was lowered into a bath of PEG 400, at a concentration of 75% and temperature of 60 C° for a period of two years.

Once the treatment had been completed and the weight and length measurements of the treatment control test-bores had been verified, the excess PEG was eliminated and the vessel was packed for transport to the shipyard where the formal shape of its hull was to be restored.

The museographic plan of the Urbieta vessel was to relate its final appearance to its operational life: the archaeological remains that had been recovered were to be reshaped into the original form of the boat. To this end, the original ship’s lines were recreated. As the archaeological remains comprised only two-thirds of the port side, didactic/educational needs provided us with the justification to reconstitute the missing

portion of the craft. To achieve this objective, fine steel ribs shaped to sustain the hull from the outside were combined with thin longitudinal battens of the same material. These were placed in the axis of the strakes to give a more realistic impression of the volume of the vessel.

In this project of re-shaping, and using other examples from across the world, the advantage of using comparative full-scale or reduced scale reproductions became evident. It allows for the presentation of the details of the vessel to the visitors: its equipment, load capacity and aspects of use and life on board. Placing the scale model next to the archaeological remains allows for immediate comparison of both and helps the general public better understand the association of these elements which would otherwise mean very little. To reconstitute the vessel’s original shape, it was necessary to develop tentative plans based on the drawings of the excavated remains and also based on the laboratory drawings of each piece.

The plans of the boat’s remains were drawn up by Aurelie Montagne, Joao Alves and Miguel Aleluya and the architectural investigation was directed by Eric Rieth. The development of plans of the hypothetical original form was carried out by naval architect Marc Ginisty. The conservation treatment was directed by Anna Jover in cooperation with Caterina Agüer, and the restitution of the final forms was carried out by Xavier Agote and his team. Manu Izaguirre coordinated the overall project.

Once this process had been completed, the boat was taken to the Maritime Museum of the Bilbao estuary on 9 January 2006 where it will be exhibited, only a few kilometres away from Gernika where it had been discovered seven years before. The entire operation was made possible thanks to the private initiative, good will and discernment of the local and regional institutions, whose competencies do not include the legal protection of archaeology in the Bizkaia area.

## Conclusion

The wreck of Urbieta is a first class discovery as it is the only boat of this period and typology that has been found so far on the Cantabrian coast. This has allowed specialists in the field to look for links between its shape and design and the various traditions of boatbuilding in the northern Atlantic.

Among these specialists, particular mention has to be made of the research group from Parks Canada involved in the study of the 16th century Basque whaleboats. For this group, the Urbieta wreck represents the only evidence of Basque boatbuilding prior to the aforementioned whaleboat, which gives it an extraordinary value, both at the local and international level.

Had this endangered site not been archaeologically rescued, an important chapter of Basque boatbuilding would have been destroyed. A historically valuable and non-renewable resource would have been lost forever.