



D 431 “Grado 2” Pilot project
Underwater cages for heritage valorisation
Activity Comprehensive Report
Spring-Summer 2021



The document contains the *“Grado 2” Pilot project Activity Preparatory phase Report for Spring-Summer 2021* summarising the planning, organisatory and preparatory work, and the *“Grado 2” Pilot project Activity Summer 2021 - Summary report*, extracted from the final report of the company that carried out the works on the sea. As the report is very the file is very large and in Italian, we propose here an abstract (full text available).

“Grado 2” Pilot project Activity
Preparatory phase Report
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“Grado 2” Pilot project Activity Preparatory phase Report Spring-Summer 2021

The launch of the activity as foreseen by the AF in WP4.3 (*Conservation, valorisation and the implementation of the accessibility to underwater heritage sites*) assumed a relevant planning, organisatory and preparatory work. As evidenced in previous Progress Report 4, an important administrative task was carried out involving different institutions at local, regional and national level to fully respect legal framework on archaeological underwater activities. To overcome any possible hurdle, a specific regional Service Conference (*Conferenza dei servizi*) was organised in Spring 2021; such consulting *common table* between public administrations, foreseen by Italian Law 241/1990, is expected to better solve problems and discuss common issues, simplifying and rationalizing the procedures that provide for the issuance of the so-called "acts of consent" (needed authorizations, clearances, opinions, etc.).

In this framework were engaged the Soprintendenza Archeologia, Belle Arti e Paesaggio (SABAP) of Friuli Venezia Giulia (the regional office of the Italian Ministry of Culture, also indicated to be the technical/institutional coordinator in charge of Grado 2 field works), the Municipality of Grado, the Grado and Monfalcone Harbour port offices, the provincial Fire Department, the Trieste Dive Team, Archaeologic Departments from University of Udine, Ca' Foscari-Venice and Salento. During the online meetings (such Conference had different evaluation/implementation steps) was shared the draft intervention project and collected suggestions and proposal from stakeholders to integrate the parts necessary for the drafting of the final plan.

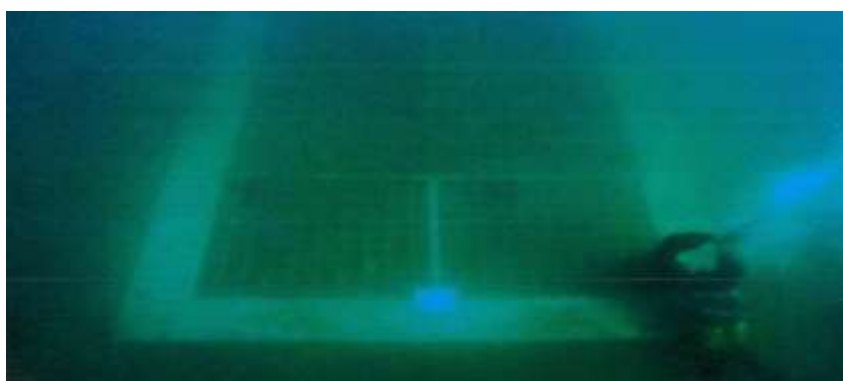
After some final observations SABAP provided on 19/05/21, to guarantee a fully correct execution of works in line with national legal rules (letter, in Ital., enclosed to previous PR), for which project LP ERPAC FVG gave reassurances for the respect of legal framework, the Soprintendenza gave the final approval for the fulfilment of the activity on 19/07/21. This implied a rescheduling of the foreseen activities, with a start-up now postponed to August (previously end June). Works finally started on 13/08/21.

In the meantime, ERPAC FVG with the technical support of Informest, took action on the purely organizational front. The Grado 2 planning activity included a tender for the realisation of the aluminium grids to be placed on the shipwreck in protection and tenders meant to select the specialised company that would carry out the underwater works.

Aluminium grids – The tender was launched by ERPAC FVG on 06/05/21 for the realisation of 20 aluminium modular mobile grids 2000x2000mm to be positioned with the already existing grids on the seabed, in order to enlarge the area in protection. Grids must be built following the features and dimensions of the existing grids previously laid down (in 2012/2015), as clearly indicated in the published public call. The grids are to be placed on a structure suitable to accommodate and support the grids themselves, after the cleaning plan of the archaeological sea wreck. Such kind of grids will enable the access to the site for a touristic/cultural usage, allowing for exploration by divers and glass-bottomed vessels without compromising its content and structure.



Grids specimen



Modular grids laid in 2015

Being an activity that the Italian public procurement Law consider as “conduct of works”, it was mandatory to draft an extensive Planning Report for the underwater intervention (with implied tender to select the expert, launched in June) including documentation and specifications for the technical-logistical support to the excavations projects and a Security and coordination Plan related to the works that will be executed. Thus, more time was spent.

Selection of the specialised company – On the basis of the above Planning Report, a tender for the selection of the company that will take up the works was launched by Informest on 15/07/21. The technical scientific requirements foresaw specific topics as

- Indication of 1 Safety Director / technical director expert in underwater shipyards; 2 Technical Underwater Operators; 1 underwater archaeologist,
- complete knowledge and provision of the work area,
- supply of the necessary equipment (boats, equipment for diving and cleaning the wreck (sorbone), communication technology,
- metal structure cleaning; temporary removal of the grids in situ,
- Excavation/cleaning and highlighting of the entire surface of the reservoir,
- Photogrammetric survey aimed at creating a 3D model and video shooting aimed at scientific documentation,
- Reposition of the old modular grids and placement of the new ones.

At the excavation and conservation works, started on 13/08/21 after the company selection, of a duration of 1 month, took furthermore part the representative of SABAP as coordinator of works, archaeologists from ERPAC, the University of Salento, Ca’ Foscari University (as project partners, the University of Udine (that previously operated on the wreck), and several students from involved universities.



UNDERWATERMUSE

“Grado 2” Pilot project Activity

Summer 2021

Summary report

1. Status quo of the area and program

The site at the beginning of the operations is completely covered by molluscs and bottom vegetation clinging to the protective cage built in 2015.

The work program schedules removing and cleaning the old grid, excavating the field by widening the 4 sides of the rectangle currently discovered and install the old and the new grid.



Fig.1 – The old grid built in the 2015



Fig.2 – The removal of the grid

2. Grid removal and cleaning operations

The operation consisted in removing the pre-existing grid in a single solution during the first day of work; after that, the complete cleaning of the grid was carried out with an underwater pressure washer. All the operations were carried out exclusively by the OTS.

3. The cleaning of the archaeological area

First of all, the photos and videos of the area were shot. The known archaeological area was delimited with a cord and measured approximately 9x5m.

The recently deposited material was then manually removed, such as shells of bivalve molluscs, sponges, calcareous algae, including fragments of electro-welded nets, deposited in the 2000 campaign and never removed during previous interventions. The operation concerned the whole area, both the one already investigated in previous campaigns, and the surrounding one.

At the same time, through the use of one and subsequently two water dredges, the real limits of the archaeological area were searched along strips parallel to the previous perimeter, about 2 m wide. Thus, the intervention area was doubled, reaching an area of approximately 13m x 9 m.

Following the removal of the superficial layers it was possible to highlight both the upper part of the load, consisting mostly of fragmentary or complete amphorae and the amphorae, usually more intact, placed at a lower level. Some amphorae have been found in isolated nuclei.



Fig. 3 – Searching the limits of the area



Fig.4 – Removing of the first layers



Fig.5 – The cleaning with water dredge



Fig.6 – The photogrammetry operations

At the end of each day, a quick photogrammetric survey was carried out to document the progress of the work. At the end of the works, a complete survey of the site was carried out.

No particular critical issues emerged other than those normally foreseen in the planning of the activities to be carried out on a site at a depth of 20 meters, with poor visibility and with variations of sea currents.

The objects identified are essentially Greco-Italian amphorae, which constitute the homogeneous load, an olla, ballast weights, a nail, a plug of amphora and a metal plate. No elements attributable to the hull of the boat have been recognized, except perhaps some concretions that could hide metal nails.

4. Collection of finds

Since the aim of the project was the musealization of the site, most of the finds have been preserved on the bottom. Exceptions are the small and particularly significant finds, an isolated amphora and all the so-called erratic fragments that would have been easily stolen through the holes in the grids.

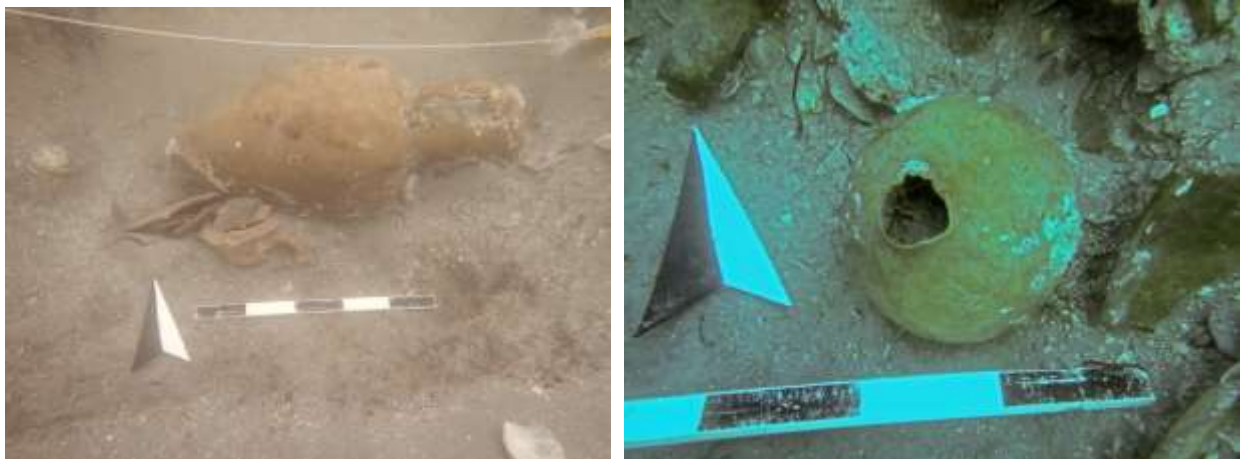


Fig. 7 -8 – The isolated amphora and the olla

5. Positioning of the new grids and definitive coverage of the site

The final operations involved covering the site by reusing the old grids and adding them with a further 20 grids perfectly compatible with the previous ones. The design of the modular grid has been adapted to the size and conformation of the dispersion of amphorae, assuming an irregular shape, but functional for protective purposes.



Fig.9 – Positioning of the new grids

6. Stakeholders involvement

The cleaning and protection campaign of the Grade 2 site saw the presence of a dozen visitors, essentially stakeholders belonging to various regional diving clubs (Trieste, Udine, Pordenone) who were able to enjoy the view of the site and follow the archaeological operations. A heartfelt involvement emerged that should form the basis of a future synergy for shared management of the archaeological area.

7. Summary

- The operations had a total duration of 24 days.
- An extension of 13m x 9m was uncovered.
- 3 essays were made.
- The 8 old protective grids have been repositioned together with 20 new additional grids.
- 12 external visitors were welcomed, some of them operational (journalist, video maker); 6 students (4 from Venice; 2 from Udine).
- Workers employed: 8 free-lances; 3 university teachers; 1 SABAP-FVG technician.
- Shootings with underwater drone were carried out, as well as photos and video footage of the site.