

Meeting Minutes — Bombeiros Lisbonenses

Meeting with Bombeiros Lisbonenses — Emergency Water System

PIC Project • Instituto Superior Técnico • March 19, 2026

1. Meeting Identification

Date	19 March 2026
Location	Instituto Superior Técnico (DEEC meeting room)
Entity	Bombeiros Lisbonenses
Participants	Francisco Caravana, Tomás Ribeiro, Nuno Pinto (Bombeiros Lisbonenses)

2. Meeting Proceedings

2.1 Presentation Assessment

During the meeting, the presentation to be delivered to Civil Protection was reviewed, and it was concluded that it does not yet meet the desired quality standard.

In light of this, it was decided that further study into the structure and hierarchy of Civil Protection is needed, in order to formulate pertinent and well-founded questions.

It was agreed that, before the next meeting — to be held on Thursday — specific questions for discussion must be prepared.

2.2 Estimate of Population covered

An urgent need was identified to revise the population figures considered for the project.

It was noted that the previously used figure (500,000 inhabitants) does not reflect the reality of the city of Lisbon, where the daily population present is significantly higher.

Accordingly, it was determined that the project should include simulations for scenarios ranging between 1,000,000 and 4,000,000 individuals.

2.3 Water Management and Reuse

The importance of implementing measures to avoid water waste was discussed.

It was agreed that water discarded during the periodic tank renewal process should be reused.

Additionally, it was considered preferable that this water be treated to make it suitable for human consumption, given that water currently used for irrigation and urban cleaning is derived from wastewater treatment.

2.4 Water Renewal System

Decision: According to the opinion of the Deputy Fire Commander, the water renewal system should be integrated into the public network and operate automatically.

It was emphasised that performing this process manually may lead to human error and compromise the reliability of the system.

Furthermore, automation offers economic advantages in the medium and long term, reducing the need for continuous human intervention

Note: The modularity of the system is not the most relevant aspect of the project — confirmed at the meeting.

2.5 Relationship with the Main Reservoirs

The relationship between the project under development and the so-called "main reservoirs" (bacias mãe) was analysed.

It was concluded that both solutions are complementary and not competing.

The main reservoirs, despite having greater storage capacity, exist in limited numbers. In contrast, the tanks proposed in the project, although of smaller capacity, can be distributed more broadly across the city, ensuring greater proximity and territorial coverage.

2.6 Connecting to the Electrical Grid

Finally, the possibility of connecting the system to the electrical grid during normal operating periods was discussed.

This solution would allow the use of higher energy-consuming equipment, such as water pumps, contributing to greater efficiency and operational capacity of the system.

3. Conclusion and Next Steps

The meeting identified several areas for improvement in the project, namely regarding population modelling, water resource management and system automation.

It was agreed that, before the next meeting:

Confirmed

- Revised population scenarios: between 1,000,000 and 4,000,000 individuals.
- Tank water to be reused and treated for human consumption.
- Automatic renewal system integrated into the public network.
- Project tanks are complementary to the main reservoirs — not competing
- Connection to the electrical grid in normal operating mode.

To Do

- Deepen the study of the structure and hierarchy of Civil Protection.
- Prepare specific questions for the Thursday meeting.
- Revise the project parameters: population covered and proposed technical systems.

4. Closing

With no further business to address, the meeting was declared closed. It was agreed that, should any clarification or additional support be needed in the development of the project, we may contact Bombeiros Lisbonenses.